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TO CALLERS AND TELEPHONERS

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Mondays to Fridays - 9.30 *a.m. till* 5.0 *p.m.*

The office is closed on Saturdays

Post-War Reconstruction and Trade

WHEN Mr. Eden made a speech at the Mansion House on May 29 he referred to post war reconstruction and trade, stressing the need for the development of a system of international exchange in which the trading of goods and services would be the central feature, and he declared that when peace came the British Government would make such relaxations of war-time financial arrangements as would permit the revival of international trade on the widest possible basis. Social security, he said, must be the first object of our domestic policy after the war not only at home but abroad, and we would wish to work with others to prevent the starvation of the post armistice period and the various economic disorders which were the cause of so much misery in the 20 years between the two wars. He foresaw Continental Europe at the end of the war starved of the foods and raw materials she was accustomed to obtain from the rest of the world, and so far as we were concerned we had no intention to return to the chaos of the old world. Because the difficulties are very real, Mr. Eden's frank admission that to ensure the right economic outcome after the war will require " constructive imagination " is all the more welcome. When the present war is ended the great masses of the peoples who have felt its incidence no less than those in the actively combatant forces may be expected to initiate, in the spirit of true democracy, a more constructive and imaginative policy than that which followed the last war, and this will entail that the industries which have contributed so greatly to the war effort shall be changed over as quickly as possible to the requirements of peace.

* * * *

Supervising Cargoes at Overseas Ports

The departure of Mr. H. E. Roberts and Mr. T. V. Nicholson for America, where they will keep in touch with, and advise on, the loading of cargoes on ships in relation to their destinations in this country, implements a recommendation made by the Select Committee on National Expenditure in its report on the handling of shipping in home ports. The report was summarised on page 430 of THE RAILWAY GAZETTE of April 11. The committee urged closer co-operation at overseas ports between the Ministries of Shipping and Transport in order that cargoes might be more suitably arranged with a view to their ultimate destination. The recent decision to appoint Lord Leathers as Minister of Transport as well as Minister of Shipping, and to fuse the two departments, should ensure that co-operation. The committee's view was that great advantages would follow the loading of ships overseas with materials which could be unloaded at one port at home, thus averting the risk of having to send the ship to more than one port for unloading. It was also suggested that greater discrimination might be shown at the ports of overseas loading in selecting cargoes for ports of delivery which entail the shortest inland transport after delivery. The work which will be undertaken by Mr. Roberts and Mr. Nicholson should go a long way towards ensuring efficiency in cargo loading,

* * *

Transport in Buenos Aires

A large deficit is shown in the annual report of the Corporation de Transportes de la Ciudad de Buenos Aires, the corporation which was formed in 1936 for the co-ordination of all the passenger transport of the city of Buenos Aires and its suburbs. Brief extracts which have reached this country show that in the year 1940 total income amounted to 58,424,873 pesos, and expenditure to 71,866,369 pesos, and that there was a deficit of 13,441,496 pesos. At the ordinary general meeting of the corporation Admiral Domecq Garcia, the Chairman, announced that negotiations were progressing with a financial group for a loan of 40,000,000 pesos. In the following table are the results of operating the main individual services of the corporation during the year.

	Income. Pesos	Expen. Incl. renewals. Pesos	Profit or Loss (+ or −) Pesos
Underground	10,927,000	8,057,000	+2,939,000
Tramways	37,733,000	49,560,000	−11,821,000
Buses	9,382,000	14,248,000	−4,865,000
Miscellaneous	306,000	—	+306,000

The unfavourable results are attributed in the main to four factors. The first of these is high material prices result-

ing from the war; the second is the increase in the price of electric current resulting from the rise in the cost of fuel used, added to the new tax imposed on petrol and gas oil; the third, increased wages and social services introduced in April, 1939, which involve an additional estimated expenditure of 5,700,000 pesos a year; and the fourth, losses in the operation of the bus lines taken over by the corporation.

* * * *

Overseas Railway Traffics

The recent improvement in the gross earnings of the four principal British-owned Argentine railways has continued in the 47th week of the financial year, and the outstanding feature of the week has been the gain of 553,000 pesos on the Buenos Ayres Great Southern. Climatic conditions have, however, still hampered the Argentine North Eastern and Entre Rios systems, which show decreases of 28,700 pesos and 27,500 pesos, respectively, for the week. The Central Uruguay, with an aggregate increase of £64,913 in sterling for the 47 weeks of the financial year, is now $56,536 up in currency receipts. On the Leopoldina the increase for the first 21 weeks of 1941 has reached £38,550. For the same period the San Paulo shows an improvement of £19,284 and 4,272 contos.

	No. of week	Weekly traffics	Inc. or decrease	Aggregate traffic	Inc. or decrease
Buenos Ayres & Pacific* ..	47th	1,545	+245	67,425	+1,734
Buenos Ayres Great Southern*	47th	2,308	+553	104,824	−5,820
Buenos Ayres Western* ..	47th	937	+292	36,930	−216
Central Argentine*	47th	2,004	+286	77,036	−6,217
		£	£	£	£
Canadian Pacific	21st	874,200	+296,000	14,956,000	+3,571,800
Bombay, Baroda and Central India	7th	325,050	+13,275	1,598,250	+66,375

* Traffic returns in thousands of pesos

Canadian Pacific aggregate gross earnings for the first four months of 1941 amountd to £12,413,600, an increase of £2,877,400 over those for the corresponding period of 1940, and the aggregate net earnings of £2,333,800 showed an improvement of £884,000.

* * * *

South African Railways

Even allowing that some 1,463 route-miles of line were taken over for working by the South African Railways & Harbours administration as a result of the mandate by the Union of German South-West Africa after the last war, there can be few railway systems which have expanded more rapidly than the South African during the past 30 years. With the completion of a short length of line now under construction near Capital Park, the total route-mileage operated for the Government will be 13,245 miles; in addition the administration works 680 more miles of line on behalf of private railways, raising the length for the operation of which it is responsible to 13,925. This figure places the system among the largest individual railways in the world. Its expansion since the Act of Union was passed in 1910 can best be appreciated from a glance at the following figures:—

	1910	1940
Total route-mileage of lines operated	7,040	13,925
Number of locomotives, coaching and goods vehicles	26,680	60,586
Train- and engine-mileage annually	29,764,137	79,872,252
Passengers carried (journeys)	33,700,849	120,282,087
Revenue and non-revenue traffic (gross tonnage)	12,414,839	38,834,557
Number of employees	47,962	123,166

Another noteworthy achievement is that when the electrification of various lines now in hand is completed, there will be over 600 route-miles of line electrically operated on the system.

* * * *

Railway Sleeping Berths

We heard recently of an argument as to the relative merits of parallel and transverse sleeping berths. From the point of view of passenger comfort, we are inclined to think that such a matter is not worth much discussion, for a great deal more depends upon the individuality of the traveller than upon so comparatively minor a detail as whether he is placed in line with or across the train, provided always he has a really comfortable bed on which to lie and that that bed is properly made. The latter is almost as important a matter as the condition and design of the mattress, and is one which, although it appears to have received more attention latterly than it did some years ago, yet still now and again calls for more care. In America it was for long the standard practice to place sleeping berths longitudinally, the paramount reason presumably being that daytime seats on each side of a central aisle lent themselves naturally to that form. On the Continent and in Great Britain the transverse berths usually found may be said to be the natural outcome of the side-corridor type of rolling stock. In the earliest sleeping car in this country, which belonged to the North British Railway and appeared on the East Coast Scotch expresses early in 1873, there were three longitudinal berths, designed on much the same lines as those of French *lits salon*, so that for daytime use they could be transformed into ordinary first-class seats. That was, of course, in the days before corridor trains.

* * * *

The James Whitcomb Riley

Competition may be expected in a new direction in the U.S.A. as a result of the inauguration from April 28 by the Cleveland, Cincinnati, Chicago & St. Louis RR.—better known as the "Big Four"—of a new streamline service between Chicago, Indianapolis, and Cincinnati. The Big Four is a subsidiary of the New York Central System, and the Pennsylvania, which competes for the Chicago—Cincinnati traffic, is not likely to accept the new situation without making an adequate reply. Some time ago the latter operated an express called the Union between Chicago and Cincinnati, *via* Fort Wayne, 313·8 miles, and over the high speed section between Englewood and Fort Wayne this was as fast as the famous Detroit Arrow, which equally competes with the New York Central's Mercury and Twilight streamliners between Chicago and Detroit; the Union was later diverted, however, to the shorter Logansport route of the Pennsylvania (298·0 miles), which does not offer equal speed advantages. The new express of the C.C.C. & St. L. is called the James Whitcomb Riley, and consists of four stainless steel Budd coaches, a dining car, an observation lounge and a baggage-mail car, seven lightweight vehicles in all, with a streamlined Pacific locomotive. Initially the time fixed for the 302·5 miles, inclusive of stops, is 5½ hr., which is an acceleration of 25 min. only on the previous best, but later reduction to 5¼ or even 5 hr. is probable if the competition develops. Leaving Cincinnati at 8 a.m. Eastern time, the new streamliner reaches Chicago at 12.30 p.m. Central time, and returns at 4.30 p.m., with arrival at Cincinnati at 11 p.m. Intermediate stops are made at Kankakee and Lafayette as well as Indianapolis.

* * * *

Mechanised Maintenance

Mechanisation in the permanent way maintenance of American and Canadian railroads is making great strides at the present time. Buying of power machines, tools, and other mechanical aids, which had been proceeding briskly for five years, rose to a peak of 5,414 appliances in 1940, with a total value of $7,250,000, but 1941 appears likely to beat this record, with a total expenditure of at least $7,700,000 on 4,700 power machines and tools, and 1,000 other appliances. Although mechanical rail-laying equipment is already widely in use, the orders now on hand include 400 power-operated spike pullers, spike drivers, fishbolt spanners, adzing machines, rail cranes, drills for fishbolt and bond holes, surface and cross grinders, jacks, ballasters, tie-tamping outfits, sleeper saws, rail benders and cranes, and welding and heat treating appliances. The wide range of grading work now in prospect calls for a considerable amount of earth-moving equipment, and 153 units, including power shovels, draglines, ditchers, dump cars and trucks, graders, spreaders, and other specialised items, are on order. Both on the grounds of appearance and the risk of fire, more attention than hitherto is being paid to weeds, and 187 appliances for dealing with them figure in the orders, such as mowers of various kinds, ballast scarifiers, weed burners, and so on; some railways, on the other hand, intend to use chemical methods for weed destruction. The equipment thus ranges over a wide field, from the more costly items, such as locomotive cranes, to the small power-driven hand tools that are now used for a great variety of maintenance operations.

XUM

Theory and Practice

When conditions are abnormal, as at the present time, and the railways are called upon to handle traffic of a nature and magnitude for which many lines were not designed, the theorist with little or no practical experience of actual railway working is apt to come very much to the fore with suggestions of how matters might be improved. Schemes for the better working of traffic, for example, are sometimes adumbrated to us, especially concerning the movement of coal, which for some time past has been much in the public eye. Most of such suggestions, however, are based upon the assumption that what is recorded upon paper is necessarily reflected in fact. As every railwayman knows, this is a fallacy, and many of the problems with which they are faced may be traced back to the very difficulty of making facts fit figures. The solution of most railway problems depends in the last resort upon the observation of certain basic principles of organisation, among which may be mentioned the proper delegation of authority and the corresponding fixing of responsibility. This is sometimes called decentralisation, but the term is apt to be misleading, like so many other labels of various kinds which do not necessarily correctly describe the thing they are intended to.

* * * *

The Appeal of Colour

No railway has done more to keep the public cheerful than the Southern by the gay and variegated shades of colour which have adorned its locomotives and rolling stock and the comparative cleanliness with which these have been maintained in spite of the difficulties of wartime. Two or three years ago a stockholder at the annual meeting expressed the hope that Southern Railway locomotives might be painted in a less sombre green than the then standard. The suggestion was soon adopted and in the last few years at least half-a-dozen different shades of green, all brighter than the previous standard, have been used, with the result that Southern rolling stock provokes an interest far greater than that of any other railway company. Alas that the green paints are now apparently not so plentiful, and some of the less important passenger locomotives are now appearing in sombre black. This, however, is relieved by the attractive form of lettering and numerals now adopted, although if it is found necessary to economise in the use of gilt for these, a trial might be made with yellow lettering shaded or pannelled in the bright malachite green of the more important passenger engines.

* * * *

The Parachute in Peace

Having attended recently a lecture on the parachute and its uses, we are impressed by the number of petty restrictions to be observed by persons alighting from aircraft compared with the fortunate passenger by train, and consider that this alone falsifies the prophecy occasionally heard today that all long-distance journeys after the war will be made by air. It seems that the parachutist, whether encumbered with his holiday suitcases or merely a light tank and tommy gun, must be able to judge with surprising accuracy first his distance from the aeroplane he has just left, and later his height above the spot upon which he proposes to alight, the correct manœuvre of his apparatus depending upon exactness in this matter. How fortunate in comparison is the railway traveller, who must take care only " not to alight until the train stops," and on many electric suburban services is protected against neglect of this simple precaution by being hermetically sealed within the carriage until the appropriate condition for descent is obtained. Again, the parachute offers no means of correcting his mistake to the traveller who alights before his destination, whereas even in these difficult days the railway traveller can usually continue his journey some time within the next twenty-four hours. Finally, should the railway passenger find himself on the platform and the train steaming away with his possessions inside it, he can soon be reunited with them at the lost property office. Not so the forgetful parachutist, who, having nicely calculated the moment to check his first exhilarating tumble, discovers that his appliance remains in the luggage rack of the fast disappearing aircraft and he is parachutist in name only.

Railways War Damage

THE Chancellor of the Exchequer has now made public the broad outlines of a scheme which the Treasury has drawn up for dealing with war damage suffered by public utility undertakings. It will be recalled that Section 40 of the War Damage Act defines the expression " public utility undertakings " as meaning any railway, light railway, tramway, trolley vehicle, canal, inland navigation, dock, harbour, quay, pier, lighthouse, gas, electricity, hydraulic power, sewage disposal, refuse disposal, or water undertaking in the United Kingdom. The framework which is now being adumbrated is therefore intended to cover the position of the railway companies which, under the original financial agreement with the Government, were to be permitted to charge the first £10,000,000 of war damage as an item of expenditure against the pool. When the Government decided that the war damage insurance must be operated on a national basis it became necessary to amend this clause of the financial agreement, and for this reason revision of the arrangement was decided upon, to be effective from the end of 1940. When the Chancellor of the Exchequer announced in the House of Commons on May 29 that he had framed the general lines of a scheme he circulated a statement summarising his proposals. This statement was given in full at page 638 of THE RAILWAY GAZETTE of June 6. It is important to note that the Chancellor recognises that the matter of determining the arrangements for compensation for war damage to public utility undertakings has its own complications, and he was careful to explain that in framing the general lines of the scheme he realised that before he could usefully introduce legislation he would need to be assured of the practicability of certain aspects of it, and also to obtain information from representatives of the various public utilities on a variety of technical matters. It would appear likely, therefore, that there must be some further delay before it is possible to introduce detailed legislation to deal with a matter which is obviously of first class importance, not only to the undertakings concerned, but also the generality of traders, consumers, and taxpayers of the country.

Broadly the scheme which the Chancellor has announced is that the Treasury should bear half the cost of making good war damage suffered by public utility undertakings, and that the other 50 per cent. should be borne by the undertakings under a mutual sharing scheme for which purpose they are to be classified into groups. Both movable and immovable property is to be covered under the proposed scheme, and damage occurring up to August 31 of this year will be eligible for compensation. Contributions of premium are to be payable in four annual instalments beginning in July, 1942. It is provided that after the war—and only then of course, will the full extent of the damage be known—the War Damage Commission is to consider whether any groups of public utilities should contribute less than 50 per cent. of the cost of making good the damage. Normally payments for damage are to be based on the actual cost of repairs, exclusive of improvements, but when buildings and plant are damaged beyond repair the replacement cost is to be allowed, after deduction of depreciation.

In order to see in proper perspective what may be involved from the point of view of railway proprietors, it is necessary to recall that the original financial agreement with the Government involved the railways in the surrender of certain valuable rights. That agreement was freely negotiated—if rather forcefully, perhaps, by the Government representatives—and was based on a guaranteed minimum net revenue to the companies of some £40,000,000 a year, plus the right to charge up to £10,000,000 of war damage in any one year as expenditure. On their part, the railways surrendered, among other things, their right to the standard revenue provisions laid down in the Railways Act of 1921. They were permitted to retain net revenue, if it could be earned, up to £43,500,000 a year, but thereafter they had to share revenue in excess of this equally with the Government. Furthermore, if in spite of this the various lines were to obtain their standard revenues, then the whole of the excess was to pass to the Government. There is no indication in the proposals relating to war damage which the Chancellor has circulated that the 50 per cent. of the cost of repairing the damage which has to

be borne by the undertakings is to be chargeable as current expenses, but presumably the premiums to be payable would be. It would appear, therefore, that if implemented in its present form the effect of the Chancellor's postulated scheme might be adversely to affect the position of the companies. It may be recalled that when the Government intimated that in its view some revision of the agreement would be necessary because of its decision to deal with compensation for war damage on a national basis, the main-line companies and the London Passenger Transport Board declared their willingness to negotiate the revision of the agreement on the understanding that no revision should be made to the prejudice of the control undertakings, or place them in a more unfavourable position than they were under the original agreement. It might well be, therefore, that the new scheme, if made effective in its present state, would bear harshly upon the railway companies. It might have the effect of super-imposing on the arrangements which were negotiated for control an unfavourable clause as regards war damage which would be detrimental to the interests of the proprietors of the lines.

It would appear, therefore, that in the negotiations with the railways it will be necessary in equity either to make some modification in the war damage scheme which has just been outlined, or carry rather further than had been expected a revision of the financial agreement which must follow the deletion of so important a clause as that relating to war damage to provide adequate compensation in some other way. The proprietors of the railways have already been heavily penalised by reason of the protracted time lag between the incidence of higher costs and means to offset it. Railway costs have been rising ever since the outbreak of the war and although the financial agreement provided for the adjustment of charges to war-time advances in expenditure, in fact no such step has been taken in respect of the period since the end of September last year. The Chancellor has intimated that he is prepared to minimise the impact to the users of increased transport costs, but unless that action is made retrospective the stockholders of the company must necessarily suffer by reason of the long delay. An early decision as to whether this course is to be adopted is urgently required, for obviously apart from it there are but two ways in which the money for the premiums, and ultimately for their share of the damage, can be provided by the companies; either they must raise charges to users, or they must entrench still further into their revenues which have already been seriously reduced by reason of having to meet for so long increases in expenditure against which the financial agreement specifically provided that they were to be safeguarded.

* * * *

American Streamline Economics

SOME remarkable statistics of the fluctuations in passenger traffic over the railways of the United States since the beginning of the present century were given in the November 16 issue of the *Railway Age*, which took the form of a special "Passenger Progress" number. From 1900 to 1920 the increase in traffic was more or less automatic, and the railways, as virtual monopolists, were more concerned in making sufficient provision to cope with this traffic than in improving their service with a view to making it more attractive. In these twenty years passenger miles increased by 206 per cent., and earnings by all but 300 per cent.; average revenues per passenger mile and per train mile were respectively 2.75 cents and $2.88, and the average number of passengers per train was 82½. The period was one of great prosperity and of corresponding increase in the movement of people from place to place; but the competition of the automobile and the motorbus had begun, and was increasing in a far greater ratio. As a result, by 1929 total passenger traffic had decreased from 47 to 31 billion passenger miles, and revenue from 1,289 to 874 billion dollars; the number of passengers per train had declined from 82½ to 55, and the average earnings from $2.88 to $2.18. Then came the depression, with a further acceleration of the loss, until by 1933 the total passenger-miles had shrunk to one-third, and the revenue to one-fourth of the peak figures of 1920. But this was the bottom. By 1937 passenger-miles were back to 25 billion, but revenue had not recovered in the same proportion, owing to the reduction in fares which the railways had been compelled to make in order to meet their competitors. By 1939, therefore, although the average number of passengers per train was 58, the average revenue per train-mile had shrunk to $1.51.

It has needed more than mere rate reduction, however, to re-attract passenger business to the railways. American lines have had to meet two distinct forms of competition. One has been the competition of the aeroplane and the high-powered private car, which has called for the provision of streamline trains of luxurious equipment, travelling at the highest practicable speeds and in some cases commanding extra service charges. The other competition has been that of long-distance motorbuses and cheap cars, and it is to meet this that the highly popular streamline "coach" flyers have been introduced, carrying only the equivalent in this country of the British third class passenger in reclining chair cars of the most comfortable type and modernistic finish. The speed at which these facilities are being introduced in the United States is well illustrated by the fact that whereas a year ago there were 66 lightweight streamline trains at work in that country, in one year 32 more, incorporating 203 cars, have been added to their number, and a further 26, also requiring the construction of 203 cars, are now on order. Another amenity in which great strides have been made is air-conditioning. Out of a total of about 39,000 railway-owned passenger cars in the U.S.A., 6,852 have been air-conditioned in no more than seven years, while the Pullman Company, proportionately, has done better still by air-conditioning 5,134 out of its total stock of 6,895 cars. Increase in speed has kept pace with increase in comfort, as is made clear by the article on p. 648, which shows that from 1932 to 1940 the mileage booked daily in the U.S.A. at start-to-stop speeds of 60 m.p.h. and over has risen from 2,022 to 70,325; every day 118 runs, with a total mileage of 6,841, are booked at 70 m.p.h. and over, and considerable lengths of line are scheduled to be covered pass-to-pass at speeds exceeding 80 m.p.h. Notwithstanding this the punctuality of these trains is extraordinarily high; for example, the streamlined Hiawatha services of the Milwaukee Road—the fastest steam-hauled trains in the world—have for the past year maintained an "on time" record of 93 per cent., and most of the Zephyr diesel services of the Burlington, which include the fastest diesel-operated run in the world, have made from 91 to 97 per cent. punctual arrivals during the year.

The greatest incentive that the American railways have had to pursue and even accelerate this process of acceleration and modernisation has been the public response. For example, the Hiawatha of the Milwaukee, which began its career in 1935 as a seven-car train, has now grown to a twice daily service in each direction, each train made up to a minimum formation of nine cars, increased if necessary to a maximum of 15—notwithstanding point-to-point (passing) schedules at over 90 m.p.h.—and frequently duplicated; the earnings of the morning Hiawatha average $3.20 a mile, and of the afternoon service as much as $3.79 a mile. This, furthermore, is despite the competition between Chicago and the Twin Cities of The 400 of the Chicago & North Western, which has doubled in formation since its introduction in 1934, and earns $3.24 a mile, and of the Twin Zephyrs of the Burlington, which from a single three-car unit on their inauguration have grown to double daily services in each direction of eight cars apiece, earning $1.82 a mile. The average number of passengers now carried daily on these ten workings—five in each direction—between Chicago and Minneapolis, a journey of over 400 miles—is 1,514, and although some of this patronage has been transferred from the night trains to these high speed day flyers, and some from the road services, in large measure this is traffic which has been created by the amenities offered. In this connection a marked tendency in modern American travel is to give the passenger facilities for making journeys up to 600 and even 700 miles without the necessity for sleeping in the train, and journeys up to 400 miles in length at such times as will leave half the business day—either morning or afternoon—to the man of affairs for the transaction of his business, apart from the time he must spend in the train. The advantage to the railways of this arrangement is that it cuts down the number

of heavy sleeping cars to be carried over many routes, while the high speed of many of the modern streamliners makes it possible for one set of stock to complete a double journey over distances up to 400 miles and more in the single day.

On the Southern Pacific the Daylight service between San Francisco and Los Angeles, originated as recently as March 21, 1937, for three years averaged 789 passengers daily on the double journey, and has already grown to two 14-car workings in each direction carrying an average of 1,508 passengers every day. The all-coach Silver Meteor of the Seaboard Air Line Railway, placed in service between New York and Miami over the lines of the Pennsylvania, the Richmond, Fredericksburg & Potomac, and the Seaboard companies on February 2, 1939, has required a 600 per cent. increase in its equipment in 19 months of operation. Such trains as the all-Pullman " City " services of the combined Chicago & North Western and Union Pacific companies, making their runs of over 2,200 miles between Chicago and the Pacific coast, and earning up to $3.13 a mile (the City of Los Angeles) and $3.49 a mile (the City of San Francisco), do so despite the fact that the former has been doubled, and now runs ten times a month each way instead of the original five times. Similarly the competing Super-Chief of the Santa Fé, which began to run between Chicago and Los Angeles in June, 1937, on a five-times-a-month schedule, was not only amplified eight months later to a ten-times-a-month service, but was supplemented from the same date by the all-coach El Capitan, also ten times monthly, without in any way reducing the patronage of the original all-Pullman service. The small number of passengers carried by some of the best-known American flyers, as a result of the spacious luxury of their accommodation, may be a matter for surprise; for example, the Twentieth Century Limited of the New York Central, composed entirely of single-room sleeping cars, with lounges, observation car, and two dining cars, carries an average of only 67 passengers per trip, but for all that earns $2.61 a mile. By contrast the Mercury—a day train, first run between Cleveland and Detroit and later extended to Chicago —which set entirely new standards in interior decoration and has been one of the most successful streamliners ever put on American metals, averages 355 passengers daily on its 448-mile run and earns $3.36 a mile. If one conclusion more than another may be drawn from the foregoing facts, it is that the sale of transportation increases in proportion to every new attraction of comfort and speed that the vendors have to offer, and that even the development of striking external features of line and colour may play its part in popularising the railway with the public.

LETTERS TO THE EDITOR

(*The Editor is not responsible for the opinions of correspondents*)

Trains Making Up Time

Southern Railway,
General Manager's Office,
Waterloo Station, S.E.1.
June 3

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—On page 593 of THE RAILWAY GAZETTE for May 30 it is stated that " so far as we know this is the first time a British railway has issued such a specific instruction with regard to trains making up time."

It may be of interest to record that the Southern Railway issued a similar instruction on December 1, 1934, which read as follows :—

> " When trains have been delayed, every effort should be made to arrive punctually by running at less than schedule time where possible, but all speed restrictions, both permanent and temporary, also coasting boards in the case of electric trains, must be strictly observed."

A supplementary instruction was issued on June 6, 1935, worded thus :—

> " Subject to station and junction timings being adhered to, drivers should, as far as possible, anticipate the effect of temporary speed restrictions, so as to obviate the loss of time that would otherwise result."

The spirit of this instruction has never been lost and probably is maintained by drivers under existing circumstances to a greater extent than ever before.

Yours truly,
C. GRASEMANN

[We understand that since the beginning of the present year similar instructions are issued by all the British main-line railways.—ED., *R.G.*]

Increases in Rail Fares

64, Plaistow Lane, Bromley, Kent
June 3

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—" Quinton " has done a service in drawing attention (in your issue of May 23) to several anomalies in the application of increases in passenger fares. Some hardships are doubtless unavoidable, and the injustices are not serious except in the lower range of fares. But if another change of fares becomes necessary, it is much to be hoped that the mistake will not again be made of calculating the new fare in terms of one which has had only temporary currency, and so accumulating deviations from the standard rate. It is also desirable that the public should know much more nearly than at present how to calculate a fare ; the boards now exhibited are almost useless for the purpose they were meant to serve.

Another sort of anomaly occurs in the relation between different kinds of fare, and is most conspicuous in the first class day return, which (being the third class day return plus 50 per cent.) is actually cheaper, when available, than the first single. Again, the first class monthly or week-end return is only 20 per cent. over the first single, whereas the third class monthly return is 33 per cent. over the third single. It is arguable that any further increase, if necessary, should fall more heavily on these monthly returns than on the singles. At the same time, there is surely no *raison d'etre* for the ordinary return, which gives no advantage over a series of singles unless it is in the matter of accompanying dogs and cycles, and luggage in advance. The restoration of tourist tickets would, however, be a welcome accompaniment of returning peace.

What is needed, then, in any future revision of fares, is an easily calculated basic rate for the singles, from which the various returns could be derived by simple rules. Passengers as well as booking clerks would be grateful for such an improvement, and it would conduce to economy, too.

Yours faithfully,
J. MACINNES

A Tribute from Chile

Ferrocarril de Arica a La Paz, S. Ch.
Arica,
March 24

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—We acknowledge with pleasure receipt of your esteemed note of January 17 last outlining the progressive work that you are carrying out in the production of the " Universal Directory of Railway Officials " for the good of all the railway companies—a labour worthy of the greatest praise. In response to your inquiry we are supplying you with the requisite details.

Accept my best wishes and auguries for the success of your business.

Yours faithfully,
F. SEPULVEDA V.
(for Manager)

PUBLICATIONS RECEIVED

British Railways in Wartime.—Under this title the British railways have published an illustrated booklet containing photographs on view in the special railway exhibition coach which began a tour of the country on June 9, and to which reference is made in "Transport Services and the War," on page 665. The booklet is on sale in the coach and on the bookstalls of the stations visited. The price is 6d., and all proceeds are to be devoted to benevolent funds of the fighting forces.

The Trainmen's Manual. 9th (1941) edition: Questions and Answers on All Rules Affecting Trainmen. By J. Aitken District Inspector. Glasgow: S. B. Aitken 16 Upland Road, W.4. 4 in. × 5½ in. 130 pages. With diagrams. Price 1s. 6d. post free.—An accurate knowledge of rules and regulations is an essential part of the equipment of every railway servant and requires diligence and care to attain. The rules governing regular routine are not perhaps very difficult to fix in the mind, but it is of equal importance to be familiar with those applicable to emergencies and special conditions, such as temporary single line working, knowledge of which is apt to grow dim with rare use. It is a good thing to refresh the memory at intervals therefore and this new edition of the author's popularly arranged booklet is to be especially recommended for this purpose covering as it does concisely all those points which enginemen, guards, and shunters in particular need to keep in mind. The production is in line with that of the other useful publications for railwaymen which the author has issued in recent years.

Of Special Interest to Steel Users.—The well-known Sheffield firm of Nitralloy Ltd. has recently issued a new catalogue entitled "The Case-Hardening of Special Steels by Nitrogen." Its 47 pages contain much descriptive matter concerning the nitriding process by which alloy steels can be surface hardened at a low temperature by the action of nascent nitrogen, and also an analytical survey of the characteristics of Nitralloy steels, their treatment and uses. These steels contain a certain percentage of aluminium both on account of the action of that substance in the formation of an extremely hard surface on the steels when submitted to the action of the nitrogen during nitriding and also because of the excellent physical properties produced in the core. The text is well written and arranged and there are numerous illustrations.

THE SCRAP HEAP

Some of the L.N.E.R. police dogs which are famed for catching would-be thieves in railway goods yards, recently caught the effects of bomb blast. A nearby land mine completely wrecked their kennels. The dogs at once made a dash for cover and all but two of them were found safe and sound when the raid was over. Of the two missing police dogs, one was apparently of the opinion that a change of surroundings would benefit his health and was eventually "arrested" by one of his human colleagues in a train bound for the country. The other was blown into the water during the raid and for a short while was mistaken for an aerial torpedo when he started swimming for the shore! All the dogs are now back at work "getting their man."

* * *

STATION STROLLERS

The queerest holiday amusement of an odd Leeds Whitsun was indulged in by the many people who strolled about in the hall of the new City Station to watch the world go by and the travellers return. I should not have been able to spot these sedate strollers for non-travellers; but a porter was quite confident that they were neither travelling nor waiting to greet friends.—*From "The Yorkshire Post."*

* * *

FAIR GAME!

If you wish to be dishonest, choose the railway company for your depredations. You have little to fear, for if you are found out it is almost a certainty that you will be let off with a small fine. This seems to us to be the logical outcome of several cases dealt with by magistrates in this area lately. In two instances people who defrauded the railway company by travelling without tickets or with old ones were fined only 10s. each. This seems to us to be as good as declaring the railway company to be legitimate prey.—*From the "Worthing Gazette."*

* * *

Serious shortage of railway wagons throughout Italy has been caused by bribery. Several famous firms and eight railway administration officials are to be tried on charges of offering or accepting bribes for placing wagons at the disposal of favoured customers. Several arrests have been made.—*From "The Star."*

* * *

OVERSHOT HIS STATION

A first-class season ticket holder on the L.N.E.R. was returning home recently when he overshot his station. He pulled the communication chain and told the guard he wanted to get out at Potters Bar. At Barnet he was fined £2 with 10s. 6d. costs for pulling the communication chain without reasonable and sufficient cause.

* * * *

ACCIDENT PREVENTION IN 1841

On Tuesday last, the 19th ins.. a general meeting of delegates from all the principal railway companies in England was held at the Queen's Hotel, Birmingham, for the purpose of considering the best means to be adopted for preventing a recurrence of the accidents which have lately taken place on railways. . . . Mr. George Carr Glyn, the Chairman of the London & Birmingham Railway Company, was called to the chair; and probably no meeting was ever held where the members represented a larger amount of property. The parties present were the representatives of considerably above £50,000,000 of capital. . . . Those who were most conversant with the management of railways stated their conviction that by far the greater part of the accidents which had occurred were referable to the neglect and disobedience of orders on the part of railway servants; and . . . it must be to an improved state of discipline and moral responsibility on the part of men employed on railways that the exemption from accidents must be looked for. In these sentiments every person who delivered his opinion concurred.—*From "The Times" of Friday, January 22, 1841.*

* * * *

ON THE LINE

The other day I was travelling to Athboy on one of our less civilised trains. Just about a mile outside the station the train came to an abrupt halt. I looked out of the window and saw a cow and her calf sauntering across the line. In spite of the loud and vulgar noises emitted by the engine, the cow and her offspring refused to hurry, and it was only after a delay of some minutes that the train was able to proceed on its way.

Returning from Athboy on the same train the following day, I was again surprised to see that the train had stopped scarcely a hundred yards out of the station. Again I looked out of the window, and this time I saw that a prospective passenger had been sighted in the distance and the train had been halted to allow him to catch it. He arrived, and the train started. It had hardly got properly under way before there was another prolonged halt. Sticking my head out of the window once more, I saw the same cow and calf on the line again, only this time apparently they had no idea of allowing the train to proceed, for they were walking away from it in between the tracks. It was not until the driver of the train and the fireman actually threatened the animals with pokers and other fire implements that they moved off. Thank Heaven we still have Irish railways worthy of the name.—*From "The Irish Times."*

OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

SOUTH AFRICA

Union-Portugal Agreement and the Railways

An agreement has been entered into between the Union of South Africa and Portugal in respect of trade with Angola and the granting of most-favoured-nation treatment on both sides. In connection with this agreement there has been an exchange of letters between the two Governments in which the Union Government promises to convey products of Angola over the South African Railways at the same rates as similar commodities from the Belgian Congo, the Rhodesias, and Nyasaland enjoy. Fishmeal from Angola is to be carried at a lower railway rate. Angola reduces customs on coal from 3·5 per cent. *ad valorem* to 2 per cent. *ad valorem*.

Capital and Betterment Estimates

The estimated expenditure on capital and betterment works for the year 1941-42 is £8,971,150, a decrease of £3,871,523 as compared with the previous year. Of this amount £6,523,386 will be chargeable to Loan and Betterment Funds and £2,447,764 to Renewals Fund and working votes. The allocation of the expenditure is as follows :—

From Loan and Betterment Funds

	£
Construction of railways	240,609
New works on open lines	3,778,125
Rolling stock	1,001,914
Road motor services	2,915
Harbours	973,865
Airways	11,000
Working capital	10,541
Redemption of certificates	304,417
Unforeseen works	200,000
	£6,523,386

From Renewals Fund and working votes

	£
New works on open lines	1,621,758
Rolling stock	714,931
Road motor services	33,339
Harbours	77,736
	£2,447,764

RHODESIA

Successful Year's Working

The approximate revenue and expenditure figures for twelve months' operations by the Beira and Rhodesia Railways indicate how the war has affected traffic. The figures given below are for calendar years and not the railway financial years :—

	Years ended December 31 1939	1940	Increase or decrease
	£	£	£
Gross earnings ...	5,430,000	6,215,000	+ 785,000
Operating expenses ...	3,455,000	3,380,000	− 75,000
Net revenue	1,975,000	2,835,000	+ 860,000

Details of increases in particular traffics are not available, but it can be mentioned that copper, coal, military stores, and material imported for the construction of buildings, etc., for the Empire Air Training Scheme have contributed towards the very satisfactory rise in revenue. All operating records were broken during 1940 and this despite the release of many railwaymen for service with the armed forces.

Reduced Dining Car Services

Owing to the depletion of staff by the calling up of stewards, the Rhodesia Railways have been compelled to curtail the dining car services on certain trains on the Bulawayo-Beira run. From May 3, 1941, only one of the thrice-weekly mail trains to and from Beira has had a dining car service throughout the journey, the other two trains losing their diners at Headlands, approximately half-way between Salisbury and Umtali, where the cars are transferred from the down to the up trains. Meals are obtainable at Umtali on both down and up journeys and time is allowed at this place to enable passengers to visit a local hotel for this purpose. One effect of this arrangement is that, to enable passengers to have an early dinner before leaving Beira, the departure of the trains from that port has been altered from 6.0 p.m. to 7.15 p.m., and, though the arrival at Salisbury is one hour later, there is no change in the Bulawayo arrival time.

ARGENTINA

Railways' Appeal to Government

The Board of Argentine Railway Managers and Representatives has addressed another note to the Minister of Public Works, reiterating requests for (*a*) a reform in the railway laws and regulations, aimed at removing the many anomalies which clog efficient working and cause financial loss to the companies, and (*b*) an increase of 5 per cent. in tariffs. The note refers to the report on the financial position of the private companies, drawn up some time ago by the Director-General of Railways, but not yet published. The note points out that though expenses have remained practically constant, gross receipts have dropped from $413,110,000 in 1936 to $360,000,000 in 1940, and net receipts (after deducting working expenses and exchange losses) from $59,199,000 to $26,000,000. This decrease is due to reduced traffic, and the impossibility under the existing *régime* of adjusting the salaries and wages bill, as is done in similar circumstances by private industrial concerns. To lower earnings have to be added exchange losses, which amounted to $49,900,000 in 1935 ; to $44,043,000 in 1936 ; $39,614,000 in 1937 ; $34,476,000 in 1938 ; $36,285,000 in 1939, and $26,000,000 in the first nine months of 1940 (exclusive of the Transandine and Córdoba Central lines, which are now State-owned).

After calling attention to the disparity between the net receipts and the sums required to meet the interest on the debentures (which for the financial year 1938-39 totalled $56,439,754, and $78,968,211 at the special exchange rate fixed by the Government for the railways) the note points out that under present conditions the shareholders have no hope of any dividend, and have received none for over ten years. Unless the private companies are accorded more equitable treatment, the confidence of investors will be destroyed.

Referring to the precarious situation of the Railway Pensions Fund, the note states that the increased tariffs authorised to cover the cost of the companies' contributions to the fund have been offset by the reductions which have had to be made in rates to meet road competition. At present the funds available for renewals are so restricted as to impair the efficiency of the railway services, which are indispensable for the economic welfare of the country. The note concludes with an urgent appeal that measures be taken to place the companies on a sound financial footing, with equitable treatment in relation to other forms of transport.

CHINA

Nanking—Pukow Wagon Ferry Reopening

To assist in the speeding up of freight traffic between North and Central China, the wagon ferry service between Nanking and Pukow will be reopened on March 15. This service has been suspended since all the ferry boats were destroyed by the retreating Chinese before the Japanese advance early during hostilities.

Railways under Chungking Government

From a recent statement by the Ministry of Communications in Chungking it appears that parts of the Chekiang—Kiangsi (eastern part), Canton—Hankow, Hunan—Kwangsi (Hengchow — Liuchow section), and Lung-Hai Railways are still being operated by the Chungking Government. They have hitherto been devoted entirely to military use, but have now been reorganised and will soon be ready for commercial traffic. The Lung-Hai line is now open for 100 miles east of Tungkwan, and special arrangements have been made for this section to be worked without interruption despite Japanese artillery fire from across the Yellow river. The Hunan—Kwangsi section has, it is announced, recently been extended into Kweichow Province.*

As a result of the reopening of the Burma Road it is hoped that a section of the Yunnan—Burma railway from Kunming will be completed this year.

MANCHUKUO

New Yalu River Bridge

A new bridge is to be built over the Yalu river at an estimated cost of Y. 1,500,000 (£88,000). It will connect the Chosen and Manchukuo railway systems, and is expected to be completed in two years' time.

* Probably this may be taken to mean that the Liuchow-Kweiyang section has been opened.—Ed., *R.G.*

AMERICAN RAILWAY SPEED IN 1940

A review of speed progress in the United States, showing the effect of continuous acceleration, particularly during the past five years, until a total is now reached of over 70,000 miles of daily runs booked 60 m.p.h. and upwards from start to stop

By CECIL J. ALLEN, M.Inst.T.

IN the February 16, 1940, issue of THE RAILWAY GAZETTE the customary annual review was given of world railway speed statistics, based on the timetables of the previous summer. These were the last months prior to the outbreak of war, which has brought all high speed to an end in the belligerent countries; but in the United States, as is made clear by the annexed tables and graphs, the development of speed continues apace, and, indeed, on a remarkably extensive scale. Fig. 1, based on the aggregate mileage of

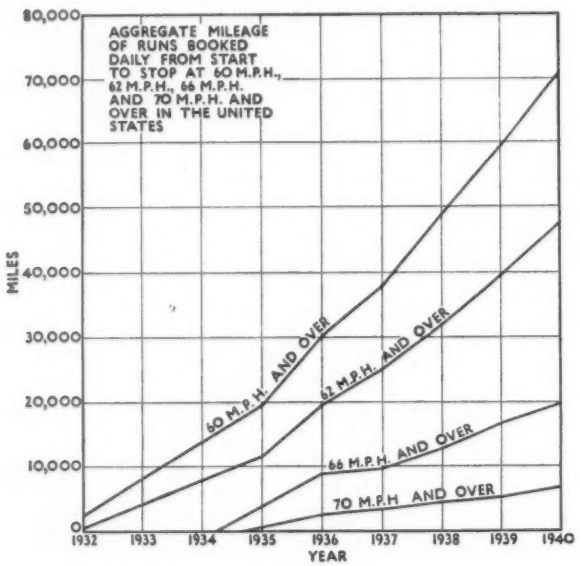


Fig. 1—Speed progress in U.S.A., during the nine-year period 1932-40

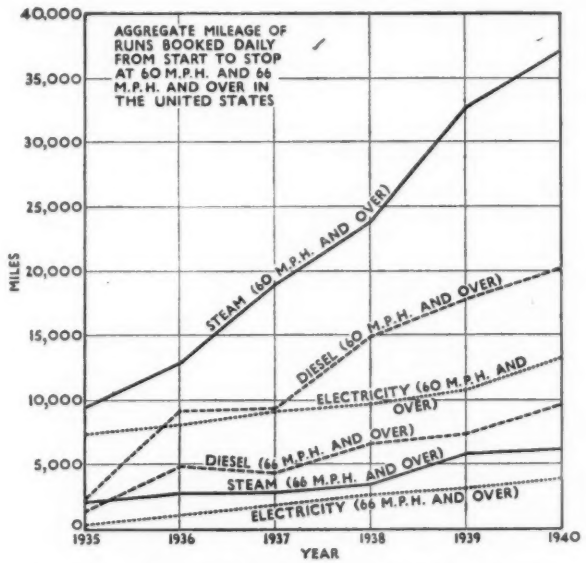


Fig. 2—A comparison of steam, diesel and electric speed progress in U.S.A., 1935—1940

American runs scheduled from start to stop at speeds of 60 m.p.h. and over, shows unbroken progress in the eight years from 1932 to 1940, until the daily total of runs booked at a mile-a-minute or over has now risen to 1,482, with a total mileage of 70,325. When it is mentioned that this figure compares with a total of 54,684 miles in all other countries in the world combined in the summer of 1939, the magnitude of the American achievement will be better appreciated. Similarly, at 62 m.p.h. and over 47,415 miles (913 runs) on American railways in 1940 compares with 33,300 miles on all other railways in the world running high speed trains in 1939; and 19,519 miles (347 runs) booked at 66 m.p.h. and over with a total of 15,729 miles elsewhere. Even at 70 m.p.h. and over 118 runs of 6,841 miles in the United States in 1940 make an excellent showing in comparison with 8,216 miles in all other countries in 1939, of which 4,694 miles were in Germany, with its highly developed diesel transport. The smooth ascent of each speed line in Fig. 1, witnessing to a development of speed that has seen no interruption during the period under review, is very impressive.

Fig. 2 shows the relative progress made by steam, diesel, and electric propulsion in the years 1935 to 1940 inclusive. While in the higher ranges of speed the diesel engine naturally has the advantage, the continued vitality of steam as an agent for high-speed transport, despite all gloomy prophecies to the contrary, is noteworthy. Indeed, if runs scheduled at 60 m.p.h. and over be considered, whereas the mileage of those diesel-hauled has increased between 1938 and 1940 from 14,840 to 20,168 (36 per cent.), and of those electrically-hauled from 9,632 to 13,127 (also 36 per cent.), the steam mileage has gone up by no less than 56 per cent. in the same period, from 23,775 to 37,030 miles. Similarly, at 66 m.p.h. and over, although diesel propulsion can show the larger totals, yet steam has again made the most progress from 1938 to 1940, the steam advance from 3,496 to 6,168 miles being a gain of 76 per cent., as compared with 42 per cent. with diesel propulsion (6,707 to 9,494 miles), and 45 per cent. with electricity (2,652 to 3,857 miles). It may be added that in reckoning these mileages the journeys of trains which run only on a certain number of days each week or month (such as the bi-weekly Super-Chief and El Capitan of the Santa Fe or the ten times monthly City of Los Angeles of the Chicago & North Western and Union Pacific) have been reckoned on a proportionate basis in order to reduce them to the equivalent of daily running.

The first table shows the high-speed mileage of every American railway that has more than 500 miles booked daily from start to stop at over 60 m.p.h. The New York Central and Pennsylvania take a considerable lead over all competitors, and both have made substantial accelerations since 1939, the former's mileage at 60 m.p.h. and over having gone up from 13,959 to 16,121 miles, and the latter's from 13,614 to 16,034 miles; the New York Central thus still retains a slight ascendancy, and both totals far exceed those of any other of the world's railways in normal years, not excepting the unified national systems of Germany and France. The New York Central figure is achieved entirely with steam; the Pennsylvania is made up in the proportion of 11,120 miles with electricity to 4,914 miles with steam, and in the latter case a further extensive acceleration programme over the electrified lines between New York, Philadelphia,

AGGREGATE MILEAGE OF RUNS ON UNITED STATES RAILWAYS, TIMED AT 60 M.P.H. AND OVER FROM START-TO-STOP, SUMMER 1940

Railway	60 m.p.h. and over	62 m.p.h. and over	66 m.p.h. and over	70 m.p.h. and over
	miles	miles	miles	miles
New York Central System	16,121 (192)	8,941 (97)	1,618 (16)	399 (3)
Pennsylvania	16,034 (326)	12,218 (234)	5,607 (93)	923 (12)
Chicago, Burlington & Quincy	5,302 (81)	4,520 (66)	3,198 (45)	1,561(22)
Union Pacific	5,215 (111)	3,068 (68)	1,547 (35)	1,400 (31)
Atchison, Topeka & Santa Fe	4,255 (85)	2,859 (56)	1,077 (25)	577 (12)
Chicago & North Western	2,882 (65)	2,280 (50)	1,171 (20)	597 (8)
Chicago, Rock Island & Pacific	2,870 (71)	1,987 (48)	1,245 (28)	325 (6)
Chicago, Milwaukee, St. Paul & Pacific	2,707 (54)	2,174 (43)	1,333 (27)	695 (15)
Baltimore & Ohio	1,525 (26)	618 (10)	—	—
Chicago, North Shore & Milwaukee	1,439 (85)	314 (19)	—	—
Missouri Pacific	1,305 (33)	1,110 (29)	265 (3)	—
Pennsylvania-Reading-Seashore	1,248 (31)	540 (12)	171 (4)	—
Seaboard Air	1,018 (26)	849 (18)	491 (8)	22 (1)
Chicago & Alton	966 (18)	653 (11)	30 (1)	—
Wabash	910 (15)	397 (9)	46 (2)	—
C.B. & Q. and C.R.I. & P. Joint	875 (12)	751 (8)	259 (4)	71 (2)
Florida East Coast	673 (25)	566 (20)	231 (8)	38 (2)
Atlantic Coast	650 (5)	180 (2)	95 (1)	—
Southern Pacific	621 (10)	417 (7)	95 (2)	—
Illinois Central	596 (13)	475 (10)	308 (6)	233 (4)
Chicago & East Illinois ...	574 (13)	545 (12)	265 (3)	—
Erie	554 (10)	421 (7)	80 (1)	—
Chicago, South Shore & South Bend	520 (50)	480 (46)	27 (3)	—
Reading	507 (16)	479 (15)	120 (4)	—
Other railways	*958 (29)	†573 (16)	—	—
Steam-operated total ...	30,070 (573)	22,303 (333)	6,168 (92)	1,699 (24)
Diesel-operated total ...	20,168 (430)	15,814 (325)	9,494 (179)	4,770 (87)
Electrically-operated total...	13,127 (399)	9,298 (255)	3,857 (76)	372 (7)
Grand total	*70,325 (1,482)	†47,415 (913)	19,519 (347)	6,841 (118)

Note.—The figures in brackets in each column indicate the number of individual runs making up each aggregate mileage figure.
* Includes four runs (145 miles) on Canadian National Railways and two runs (128 miles) on Canadian Pacific Railway. † Includes two runs (95 miles) on Canadian National Railways and one run (64 miles) on Canadian Pacific Railway.

Washington, and Harrisburg has been chiefly responsible. It will be noted that the New York Central supremacy extends only to bookings at 60 m.p.h. and over; the Pennsylvania has a handsome lead in the higher ranges of speed. Elsewhere in this table the chief advances over 1939 have been made by the Chicago, Rock Island & Pacific, whose mileages, entirely achieved with diesel power, have been doubled in all ranges of speed by the putting into operation of a number of new " Rocket " services, and especially the new Chicago—Denver train. New appearances in this table are the Seaboard Air Line, the Florida East Coast, and the Atlantic Coast, by reason of the diesel-hauled streamliners now running between the principal cities in the Eastern States and the Florida coast resorts. The best figures in the high ranges of speed are those of the Chicago, Burlington & Quincy and the Union Pacific, the former with its diesel-driven Zephyrs and the latter with its City series of diesel units; and an excellent showing is made by the Chicago, Milwaukee, St. Paul & Pacific with steam propulsion exclusively. The Chicago North Shore & Milwaukee and the Chicago, South Shore & South Bend are both inter-urban electric tramways with very fast point-to-point timings.

In the second table are given the fastest individual runs made on American railways, with diesel propulsion at 75 m.p.h. and over, with steam at 70 m.p.h. and over, and with electricity at 68 m.p.h. and over. The runs in this table are for the most part the product of competitive conditions, principally between Chicago and the Twin Cities of St. Paul and Minneapolis (the Burlington, Milwaukee, and Chicago & North Western); Chicago and Denver (the Burlington, Chicago & North Western-Union Pacific, and Rock Island); Chicago and the Pacific Coast (Chicago & North Western-Union Pacific and Santa Fe); Chicago and New York (New York Central and Pennsylvania); and Chicago and Detroit (Pennsylvania-Wabash and New York Central-Michigan Central). Other similar competitions which contribute to the mileage figures, but do not produce any runs quite fast enough to be included in this brief list, are Chicago and St. Louis (Wabash, Chicago & Alton, Illinois Central, and Chicago & East Illinois), and Washington and the Florida coast (Atlantic Coast, Florida East Coast, and Seaboard Air Line). New competitions are also developing south and south-west of Chicago, in which the Rock Island, Missouri Pacific, and other lines are concerned. Headed by the 84·0 m.p.h. Zephyr run of the Burlington from East Dubuque to Prairie du Chien—the fastest in the world—the diesel section of this table can now show six runs timed at over 80 m.p.h. from start to stop, and 24, totalling 2,237 miles, at over 75 m.p.h. In the steam section of the table the Milwaukee Hiawatha services (morning and evening trains in each direction and an additional westbound North Woods

THE FASTEST START-TO-STOP RUNS IN THE UNITED STATES, SUMMER, 1940

Railway	Train	From	To	Distance	Time	Speed	No. of runs daily
Diesel Traction	(75 m.p.h. and over)			miles	min.	m.p.h.	
Burlington ...	Zephyr ...	East Dubuque	Prairie du Chien	54·6	39	84·0	1
Union Pacific	City of Denver	Grand Island	Columbus	62·4	46	81·4	1
Burlington ...	Zephyr ...	La Crosse	Prairie du Chien	57·7	43	80·5	3*
Union Pacific	City of Denver	North Platte	Kearney	95·0	71	80·3	1
Santa Fe ...	Two trains §	La Junta ...	Dodge City	202·4	155	78·3	2†
Union Pacific	" City " Services	North Platte	Grand Island	137·2	106	77·7	3‡
,,	City of Denver	Julesburg ...	North Platte	81·2	63	77·3	1
Burlington ...	Denver Zephyr	Aurora ...	Galesburg	124·6	97	77·1	2*
,, ...	Zephyr ...	Prairie du Chien	La Crosse	57·7	45	76·9	1
Santa Fe ...	Super-Chief	Dodge City	Hutchinson	120·2	94	76·7	1†
Chicago & N.W.	The 400 ...	Evanston ...	Racine ...	49·8	39	76·6	1
Santa Fe ...	El Capitan	Dodge City	La Junta ...	202·4	159	76·4	1†
Florida East Coast	Henry M. Flagler	Cocoa Rockledge	Titusville	19·1	15	76 4	1
Burlington ...	Zephyr ...	North La Crosse	Miner ...	26·6	21	76·0	1
,, ...	,, ...	Aurora ...	Oregon ...	60·5	48	75·6	1
Santa Fe ...	El Capitan	Dodge City	Newton ...	153·1	122	75·3	1†
Union Pacific	City of Denver	Kearney ...	North Platte	95·0	76	75·0	1
,,	,, ,,	Sterling ...	Julesburg ...	57·5	46	75·0	1
Steam Traction	(70 m.p.h. and over)						
Milwaukee ...	Hiawatha ...	Sparta ...	Portage ...	78·3	58	81·0	1
,, ...	,, ...	New Lisbon	Portage ...	43·1	33	78·4	2
,, ...	Chippewa	Sturtevant	Deerfield ...	37·9	30	75·8	1
,, ...	Hiawatha ...	Portage ...	Watertown	46·9	38	74·1	1
,, ...	,, ...	Portage ...	Columbus	28·2	23	73·6	1
Pennsylvania	Detroit Arrow	Englewood	Fort Wayne	140·9	115	73·5	1
Milwaukee ...	Hiawatha ...	New Lisbon	La Crosse	59·8	49	73·2	2*
Pennsylvania	Detroit Arrow	Fort Wayne	Englewood	140·9	116	72·9	1
,, ...	Juniata ...	Plymouth ...	Fort Wayne	64·1	53	72·6	1
New York Central	20th Century Ltd.	Elkhart ...	Toledo ...	133·0	110	72·5	1
Milwaukee ...	Hiawatha ...	Wisconsin Dells	Mauston ...	19·2	16	72·0	1
,, ...	,, ...	Deerfield ...	Milwaukee	61·1	51	71 9	1
,, ...	,, ...	Chicago ...	Milwaukee	85·0	71	71·8	1
,, ...	,, ...	Milwaukee	Portage ...	92·9	78	71·5	2
Pennsylvania	Liberty Ltd.	Plymouth ...	Fort Wayne	64·1	54	71·2	1
New York Central	20th Century Ltd.	Toledo ...	Elkhart ...	133·0	113	70·6	1
Illinois Central	Daylight ...	Kankakee ...	Gibson City	54·1	46	70·6	1
Pennsylvania	Broadway Ltd.	Englewood	Fort Wayne	140·9	120	70·5	1
Milwaukee ...	Hiawatha ...	La Crosse	Sparta ...	24·6	21	70·3	1
New York Central	Pacemaker	Elkhart ...	Toledo ...	133·0	114	70·0	1
Milwaukee ...	Copper Country Ltd.	Western Avenue	Deerfield ...	21·0	18	70·0	1
Electric Traction	(68 m.p.h. and over)						
C.S.S. & S.B.	One run ...	Davis ...	Lake Park	14·3	12	71·5	1
Pennsylvania	Congressional	N. Philadelphia	Newark ...	76·0	64	71·3	1
,, ...	No. 403 ...	Newark (Del.)	Baltimore	56·4	48	70·5	1
,, ...	Three trains ‖	Newark ...	N. Philadelphia	76·0	65	70·2	3
,, ...	East Wind...	N. Philadelphia	Trenton ...	27·9	24	69·8	1
,, ...	Two trains ¶	Baltimore	Wilmington	68·4	59	69·6	3*
,, ...	Broadway Ltd.	Newark ...	N. Philadelphia	76·0	66	69·1	1
,, ...	Sea Plane ...	Trenton ...	Elizabeth ...	42·6	37	69·1	1
,, ...	Two trains ††	Newark ...	Trenton ...	48·1	42	68·7	2
,, ...	Seven runs	Baltimore	Wilmington	68·4	60	68·4	7
,, ...	Two trains ‡‡	Newark ...	N. Philadelphia	76·0	67	68·1	2

* In both directions of running. † Twice weekly. ‡ One run ten times monthly and two runs five times monthly. § Super-Chief & El Capitan. ‖ Broadway Limited, Congressional and St. Louisan. ¶ Congressional and East Wind. †† East Wind and No. 206. ‡‡ Senator and No. 202.

section, making five trains in all) take most of the honours, including the first six places, and thirteen out of the first seventeen places, headed by the 81·0 m.p.h. run from Sparta to Portage—the fastest with steam in the world. The Detroit Arrow, once the fastest booking with steam, now takes seventh place; and it is notable that by comparison the L.N.E.R. Coronation—in normal times the fastest train in the British Empire—would, on its 71·9 m.p.h. run from King's Cross to York, rank fourteenth in this list of high-speed steam journeys. It will be noted that the fourteen-car Twentieth Century Limited of the New York Central has now been speeded up to a run at 72·5 m.p.h. in one direction between Elkhart and Toledo, and to 70·6 m.p.h. in the other; Elkhart is a regular service stop, though not for passenger purposes. On the Pennsylvania, also, timings at over 70 m.p.h. of such heavy expresses as the Broadway Limited and Liberty Limited are very creditable. The all-coach Pacemaker of the New York Central has a run at 70·0 m.p.h. from Elkhart to Toledo. As yet electricity is not responsible for any start-to-stop speeds greatly exceeding 70 m.p.h., but the Pennsylvania is making steady progress in accelerating its electric services, there being now 22 daily runs booked at over 68 m.p.h.

The point-to-point schedules of some of the flyers figuring in Table B are remarkable. On their westbound journey, both steam-hauled Hiawatha trains of the Milwaukee are booked over the 57·6 miles from Tower A 20 (Chicago) to Lake (Milwaukee) in 38 min., at an average of 90·9 m.p.h., of which the 16·1 miles from Sturtevant to Lake are timed at 96·6 m.p.h. In the reverse direction the allowance from Lake to Tower A 20 is 40 min. (86·4 m.p.h.). The eastbound morning Hiawatha, on the fastest run with steam in the world (Sparta to Portage) is booked over the 48·4 miles from Tunnel City to Wisconsin Dells in 32 min., at an average of 90·8 m.p.h. As regards heavier trains operated by steam, the eastbound Twentieth Century Limited of the New York Central is scheduled from Mina to Tower D, 30·3 miles, in 23 min., at 78·3 m.p.h., on the Elkhart—Toledo run. With diesel propulsion, notable long-distance schedules are those of the Super-Chief and El Capitan of the Santa Fe, which on their 202·4-mile non-stop journeys at 78·3 m.p.h. from La Junta to Dodge City are booked between Hilton and Pierceville, 136·7 miles, in 98 min., at 83·7 m.p.h. throughout. Over shorter distances The 400 of the Chicago & North Western is allowed 11 min. for the 16·4 miles from Cudahy to Racine (89·5 m.p.h.), and 18 min. for the 27·1 miles from Kenosha to Highwood (90·3 m.p.h.) on its Milwaukee to Chicago run. Only on the East Dubuque to Prairie du Chien 84·0 m.p.h. run of the Burlington Zephyr are there bookings at over 100 m.p.h., the 23·95 miles from Cassville to Crawford being allowed only 14 min. (102·6 m.p.h.).

The average length of American high-speed journeys is relatively short; 1,482 runs at 60 m.p.h. and over of an aggregate length of 70,325 miles gives an average of only 47·5 miles per journey (though in view of the proportioning down of mileage in the case of runs not made daily the actual average is a little higher than this). The reason is that over many long distance American main lines the services are relatively infrequent, and numerous stops must therefore be made to give adequate service to intermediate stations. In many cases this fact adds considerably to the merit of the locomotive work performed. For example, the steam-hauled westbound morning Hiawatha of the Milwaukee must run the 411·5 miles from Chicago to St. Paul, with sixteen intermediate stops, in 7 hr. 20 min. With diesel propulsion the Henry M. Flagler of the Florida East Coast covers the 346·3 miles from Jacksonville to Miami, with 17 stops, in one minute under 6 hr. By reason of a considerable speed-up over the Union Pacific between Kansas City and Denver, the Pony Express covers the 640 miles in 10 hr. 50 min., and train No. 21 in 11 hr., all intermediate stops included. There has also been a levelling up over certain routes to the highest existing standards; for example, the Ohio State Limited of the New York Central, with 7 hr. 27 min. allowed for the 435·9 miles from New York to Buffalo, including intermediate stops, is only 2 min. slower than the Twentieth Century Limited. From the foregoing particulars it is clear that the uncertainties of world war conditions have not yet been allowed by American railways to hinder their enterprise, and that no effort is being spared to maintain their services at the highest practicable level of speed. News appearing from time to time in the Overseas section of THE RAILWAY GAZETTE and elsewhere shows that no less attention is devoted to the development of comfort in long distance travel, and to the maintenance of what has now become a high standard of safe operation. In conclusion, the writer must express his acknowledgements to Mr. Eric Crickmay, of New York, for the list of high speed American runs, taken from the working timetables of all the companies concerned, on which the foregoing statistics have been based.

Indian Railway Budget Speech

THE turning over to military needs of whole railway workshops in India, and the increasing production of war materials varying from complete ambulance trains to small parts of munitions by those retained, were mentioned in his railway budget speech in the Legislative Assembly on February 19 by Sir Andrew Clow. Meanwhile, though the prospect of locomotive building as a large-scale Indian industry has receded, orders have been placed with the Bombay, Baroda & Central India Railway for 25 new broad-gauge engines, 10 for the North Western and 15 for the Great Indian Peninsula Railway; it has, however, not yet been possible to secure all the necessary materials even for these. The total of 305 route-miles of lines dismantled by March 31 represents an important release of materials and equipment for war purposes. It is all broad gauge except 44 miles of 2 ft. 6 in. gauge, and involves an appreciable credit for materials and reduction in capital. Regarding the prospective taking over by the State of the B.B. & C.I. and Assam-Bengal Railways, Sir Andrew Clow pointed out that the Government already owned 96 and 92 per cent. of the capital of those lines respectively, and payments to the companies concerned would be £2,000,000 and £1,500,000; the latter railway would be absorbed into the Eastern Bengal system.

As a result of the Moody Wagon Turn-round Committee's recommendations and the appointment of a special Transport Advisory Officer in January, 1940, the two major coal-carrying lines, the East Indian and Bengal-Nagpur, had, in the five months ended April, 1940, been able to supply the trade with 48,000 more wagons than in the corresponding months a year earlier, an increase of about 12 per cent. Turning to finances, the Member for Communications stated that revised estimates for the year ending March 31, 1941, placed traffic receipts at Rs. 109¼ crores (roughly £82 million) or Rs. 11½ crores more than in 1939-40 and Rs. 6¼ crores more than in the original budget. Working expenses, including Rs. 12⅔ crores for depreciation, were likely to be just under Rs. 66¾ crores or 1¾ crores more than a year earlier. After adding interest charges at Rs. 28¾ crores and deducting Rs. 79 lakhs (say ¾ crore) as the balance of miscellaneous receipts over expenditure, the net expenditure was expected to total Rs. 94¾ crores, leaving a surplus of Rs. 14½ crores, the highest since railway finances had been treated separately.

In the present uncertain conditions receipts for the year March 31, 1942, had been estimated at a crore below the 1940-41 revised figure, or at Rs. 108½ crores.* Allowing for net miscellaneous receipts, the expected income was, therefore, just over Rs. 109 crores. On the other hand, working expenses were estimated at nearly Rs. 2 crores more than in the then current year, or at Rs. 68·60 crores including depreciation. But interest charges would be only Rs. 28·60 crores, Rs. 14 lakhs less than in 1940-41, making the estimated total expenditure Rs. 97·20 crores, and leaving a surplus of Rs. 11·83 crores. Of this, if it materialised, it had been decided to credit the general revenues of the country with Rs. 9·61 crores, leaving a final net gain to railways of only Rs. 2·22 crores. This result is disappointing from the railway point of view, but Sir Andrew Clow expressed the view that the alternative would be an even heavier burden on the taxpayer.

* Say £81½ millions. Rs. 1 crore = Rs. 100 lakhs = £750,000.

ROAD TRANSPORT SECTION

This section appears at four-weekly intervals

Todmorden Joint Bus Services

AS long ago as 1906, the Todmorden Corporation secured an Act of Parliament authorising it to provide and run motorbuses within the borough, which incidentally has never possessed a tramway service. Motorbus services were inaugurated on January 1, 1907, and provided an important link in the passenger road transport facilities between Lancashire and Yorkshire. A Provisional Order of 1923 enabled the Corporation to run these buses over certain defined routes outside the borough to Littleborough and Hebden Bridge, and to other districts outside the borough by consent of the Ministry of Transport and (subject to a right of appeal) of the local authority of the district. In exercise of these powers the Minister of Transport sanctioned the running of buses on routes from Todmorden to Burnley, Bacup, Rochdale, and Lumbutts; from Hebden Bridge to Keighley; and from Bacup to Burnley. After the main-line railway companies had secured wide road powers under their Acts of August 3, 1928, they negotiated with various important municipal motorbus systems, and on January 1, 1931, the L.M.S.R. acquired by agreement an interest in the services operated by the Todmorden Corporation. These services are now under the control of the Todmorden Joint Omnibus Committee, consisting of representatives of the Todmorden Corporation and the L.M.S.R. At the present time regular services are operated on ten interurban routes with a total route mileage of 51. In two cases these services are worked jointly with other authorities, namely, with Keighley-West Yorkshire Services Limited (an associate of the L.M.S.R. and the L.N.E.R.) and with Rochdale Corporation. The rolling stock comprises 40 buses of Leyland make, of which 27 are double-deckers and 13 single-deckers. The total of passengers carried annually is upwards of 6,800,000, and the annual bus miles run are some 1,320,000.

Britannia

OUR morning mail recently included a copy of a handsome volume strongly reminiscent of the saner days of peace. Such a volume could scarcely be produced in the restricted conditions at present obtaining and in fact it would not have been distributed in wartime but for the great risk of destruction to the stock as the result of enemy action. This volume, which is entitled "Britannia, Volume the First: or an illustration of the Kingdom of England and Dominion of Wales," consists of a slightly reduced reproduction of John Ogilby's road maps originally issued under that title in 1675. The facsimile was produced for Alexander Duckham & Co. Ltd. by Waterlow & Sons Limited to celebrate the 40th birthday (in November, 1939) of the firm of Duckham, and before the outbreak of war the book was packed ready for dispatch, but a celebration seemed out of place under war conditions, and so it was decided at first to postpone the issue until after the war. Then intensive air raids began, and, knowing that irreplaceable books had already been destroyed by enemy action—the stock of the present volume has already had two narrow escapes from bombing—Alexander Duckham & Co. Ltd. decided to distribute the copies as an earnest of happier times to come and in order to adopt the Government policy of dispersal as a means of avoiding total destruction. Opportunity has been taken to ask the pleased recipients of a copy to make a contribution to the Royal Air Force Benevolent Fund, a particularly apt appeal in all the circumstances. A perusal of this delightful volume encourages one to devote more time than most persons have available at present, and there can be little doubt that those who possess copies will take steps to preserve them safely for peacetime enjoyment. The roads of this country as delineated by Ogilby in many cases bear a marked similarity to the main roads of today, and a comparison of these maps of more than 2½ centuries ago with modern maps clearly demonstrates the historic basis upon which our trunk road system has been built. A pictorial inset on Plate 1 shows the method of road measuring by a man pushing a wooden wheel with a registering dial on the handle. Only a few years ago such a device was used regularly by the London General Omnibus Co. Ltd. for planning new motorbus routes.

The Tramways of Canada

PASSENGERS carried by the 36 street tramways and interurban electric railways in Canada during 1939 amounted to 632,533,152, according to Statistics of Electric Railways of Canada, recently issued by the Dominion Bureau of Statistics, Ottawa. Excluding the 1938 traffic of the Guelph Radial Railway and the Sandwich, Windsor & Amherstburg Railway, which were not included in the 1939 report, this was an increase of 12,146,483 passengers, or 2 per cent. The Guelph Radial Railway used motorbuses exclusively during 1939, and the Sandwich, Windsor & Amherstburg Railway changed to buses early in the year. Many of the tramways and electric railways also operate motorbuses, and the statistics of both operations are included. Most of the undertakings showed improvements over 1938 operations, and only 8 of the 36 systems showing reduced traffic. Gross revenues increased to $42,537,767 in 1938. This comparison is also affected by the change in railways included in the reports. The Montreal system carried almost a third of the total passengers, and the Toronto system carried more than a quarter of the total. The increase on the Toronto system was 3,655,214 passengers, or 2·3 per cent. which was the largest in numbers, but the Kitchener Railway showed a gain of 548,734 passengers, or 19·3 per cent. The figure for route miles operated has shown an almost continuous decline since 1925, and in 1939 it dropped to 1,592 from 1,693 in 1938. The decrease in passenger-car miles from 123,201,830 in 1938 to 121,528,380 was due partly to the fact that the two systems mentioned above changed to motorbus operation. Three systems—Montreal, Winnipeg, and Edmonton—now use trolleybuses; and 22 of the 36 systems operate both electric tramcars and motorbuses. The number of municipalities served exclusively by motorbuses is increasing steadily. In the past 20 years no fewer than 26 tramway and interurban electric railway systems have ceased operating as such, not including the Nipissing Central Railway which changed to steam traction.

Tramways in the Soviet Union

DURING the past 20 years, together with the development of cities new and old, urban passenger transport facilities have increased rapidly. In the past decade tramway and trolleybus lines have represented an expenditure of about 900,000,000 roubles, and by January 1, 1940, 84 cities had tram services, compared with 34 in 1917. The total length of these lines increased 2·6 times, to 2,511 miles, and the number of passenger cars increased from 4,127 to 10,761. In 1939 the tramways carried 7,072,000,000 passengers. Nevertheless it seems that plans were not realised. For example, Kazan showed a plan execution of 86·5 per cent., Kuibyshev 87·2 per cent., Mariupol 79·3 per cent., and Makeyevka 85·3 per cent. Similarly, the use of the tramcars was in many cases only 50 per cent. of capacity, probably because the vehicles were in bad condition and out of service. The record of the first six months of last year does not show any improvement; in fact, conditions in the towns with poor records are even worse than in the previous year. There

has also been a slowing up of service in these towns, with a reduction of speed from 6 to 5 m.p.h. One of the serious difficulties is the length of time spent on repairing tramcars, resulting often in their being again withdrawn from service and returned to the shops because repairs were badly executed. In one town there was a loss of 7,290 tramcar-days because of repairs, and in another one of 4,090 days. In the Ukraine Republic tramcars under repair lost 32,933 tramcar-days, and 59,000 tramcars were taken out of service for repairs. This condition indicates bad management and delay in effecting repairs and using the labour force available. In a number of towns there was a continuous shortage of drivers and conductors, because of unauthorised absenteeism and loafing. It is hoped that the strict application of a new law punishing these misdemeanours will result in a more reliable labour force of higher quality.

The Diesel Vehicle Position

ALTHOUGH it is only a matter of a dozen years or so since the first oil-engined vehicles began to run over the roads of Britain, there are now well over 30,000 at work. Progress at first was extraordinarily slow, but the curve of applications has steepened considerably during the last seven years. According to the Cantor Lectures entitled " Recent Developments in Internal-Combustion Engines," read by Professor S. J. Davies before the Royal Society of Arts in November and December last, there were at the end of 1939 about 31,000 diesel road vehicles at work in this country, of which 21,500 were passenger vehicles. The advantages stated were lower fuel consumption, clean and smell-free exhaust, repair and overhaul costs no greater than for petrol engines, and running comparable to that of the petrol type as regards roughness and noise. Professor Davies claimed that the best road oil engines in the world were being built in this country, and for smoothness of running, fuel consumption, and purity of exhaust had no compeers. This is certainly true as regards operation in this country, but it is well to remember that in certain countries the fuel used could scarcely be burned by standard English-built engines. The increase in the number of diesel-engined vehicles has been helped by the extraordinary taxation methods prevalent in this country, and to the same source may be traced a gradual trend towards direct-injection engines, which as a rule have the highest thermal efficiency.

Interesting in these connections are the remarks made by Mr. E. C. Ottaway, in his paper " Motor Transport " prepared for the American Summer Meeting of the Institution of Mechanical Engineers, September, 1939. At that time the London Passenger Transport Board had in traffic 3,567 diesel and 2,494 petrol engines, and had about 20 per cent. fewer road failures with the diesels. Compared with petrol engines, an improvement in fuel consumption of 90 per cent. could be obtained with the direct-injection engine and 80 per cent. with indirect. The high cost of fuel, in conjunction with the limitation upon vehicle weight and size, had further resulted in a tendency to use small cylinder capacity; the maximum output had gone down somewhat in recent years. Most modern buses weighed the maximum permitted by the regulations, and the oil engines installed gave 8·9 to 12·2 b.h.p. per ton for passenger vehicles. As regards vehicle performance, Mr. Ottaway rightly emphasised the importance of using the maximum torque available between 800 and 1,200 r.p.m. rather than upon the maximum output at top revs. In addition to lower fuel consumption, the modern direct-injection engine had a low lubricating-oil consumption, and certain engines used by London Transport were observed to run 6,700 m.p.g. when new, and 1,000 m.p.g. after 30,000 miles of service; with indirect injection the corresponding figures were only 536 and 200 m.p.g. The cost of an oil engine installation, including the auxiliary equipment, was about £175 greater than that of a corresponding petrol engine, which meant that a fairly high mileage had to be made in order to recoup financial charges. Moreover, the weight of the engine was at least 2 lb. per b.h.p. more than that of the petrol engine, but despite these and other difficulties the diesel had been found to be more reliable than the petrol engine.

Trackways for Feeder Roads to Railways

IN the Colonies, India, and other less developed countries the problem of providing to wayside stations feeder roads that are at once cheap to construct and maintain is frequently to the fore. The ordinary earth road, though cheap in first cost, suffers considerably from wear, due largely to the fact that, at any rate in India, the vehicle generally using it is the humble country cart hauled by two bullocks, each exactly in front of one wheel, the tyre of which is narrow. Severe rutting quickly takes place and in the rainy season the road becomes almost impassable, whereas in dry weather the surface rapidly disappears in the form of clouds of dust. The cheapest form of metalled road, say 9 ft. or 10 ft. wide, can be built for, perhaps, £600 a mile more than the earth road, but its upkeep is unlikely to average at much under £35 a mile, again over and above that of an earth road; the more usual figures would, in fact, be nearer double these in both cases.

Where the cart is likely to remain the normal vehicle for ordinary local marketing or station work, and where there is yet a considerable traffic from and to each village, the " trackway " appears to offer considerable advantages, according to an article recently published in the *Indian Concrete Journal* by Mr. K. G. Mitchell, C.I.E., Consulting Engineer for Roads to the Government of India. It consists of two parallel lines of concrete slabs spaced to suit the usual bullock cart track. The type specified by Mr. Mitchell has concrete slabs 6 in. thick and 30 ft. to 50 ft. in length, with a small quantity of negative bending reinforcement near the ends, but without dowels or sleeper joints. If the formation is suitable, slightly thinner slabs might be used. The principal advantages of the trackway over the earth road is that it reduces maintenance and resistance for wheeled traffic, and, in addition to carrying cart traffic, makes possible the use of light buses or lorries without fear of bogging in the rains or causing excessive dust in dry weather. In practice it has been found that bullocks quickly appreciate the easing of their work by the use of trackways and, of their own accord, keep to the centres of the tracks; as loads are generally one-way the empty cart can easily give way when passing a loaded cart. The only essential maintenance is to keep the earth well up to the trackway level, or better still, slightly above it. This helps carts to keep to the tracks and distributes a thin layer of earth over each track, which protects the latter from deformed tyres and is easier on the hooves of the bullocks. First cost is stated to be at most £750 a mile in India, and the tracks are expected to last at least 20 years. Annual maintenance is found to work out at about £7 10s. a mile only; these figures are over and above the prime and recurring costs of the earth road. It is significant, therefore, that metalled road maintenance is some 4½ times that of trackways—presumably within the 20-year period. At any rate the provision of trackways seems to call for consideration.

Motor Transport Nationalisation in Lithuania

All motorbuses, lorries, and trailers in Lithuania, together with their accessories, tools, spare parts, and related materials, are nationalised by a recent ukase, according to the Kaunas (Kovno) press. By the same ukase, all garages necessary to motor transport the area of which exceeds 40 square metres, and all repair shops and repair machines, with their equipment, required in connection with motor transport, are also nationalised. A resolution of the Soviet of People's Commissars of the Lithuanian Soviet Socialist Republic, reported at the same time, prescribes that the obligations of the former owners of the articles so nationalised shall be assumed officially by the nationalised enterprise and that these shall be paid in the following order: Taxes, workers' wages, debts to nationalised enterprises and banks, all other debts. The Commissar for Communal Economy is required, according to this resolution, to conduct the nationalisation without interruption of services. It may be recalled that the three Baltic States of Lithuania, Latvia, and Estonia decided (on July 21, 1940) under Russian pressure to become Soviet Republics and to join the Soviet Union.

Road Transport and the War—22

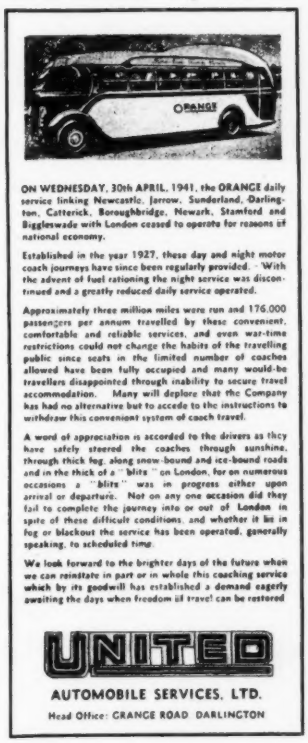
Pedestrians' mistakes in blackout — Burma Road traffic — German road transport—Slovak railway road services—Gas vehicles in Sweden and Brazil

At Manchester Assizes (Civil Court) on May 5, a claim was heard by Mrs. Mary Hall against the Manchester Corporation for damages sustained in the blackout on May 5 of last year when she and a companion were knocked down by a bus at Stretford. While walking with Miss Nuttall, the plaintiff was run over near a temporary refuge in the centre of the roadway. Mr. Justice Macnaghten said that Miss Nuttall had made two mistakes. An island refuge was under construction and she wrongly concluded there was a Belisha crossing there. She was also under the impression that a red light controlled all the traffic, whereas it controlled only traffic out of King Street. The accident was due to these mistakes, and the bus driver was in no way to blame. The action therefore failed. The Manchester Corporation did not ask for costs.

Traffic on the Burma Road

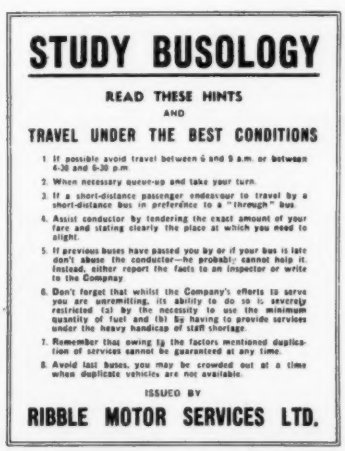
A Reuters correspondent, who recently made a ten-day trip over the Burma Road, states that, so remarkable are the Chinese powers of improvisation and recuperation, the road will never be effectively interrupted for any length of time by air-bombing. Even when the Mekang and Salween bridges are damaged the traffic is carried on over the rivers on improvised ferries, consisting of rafts of empty petrol

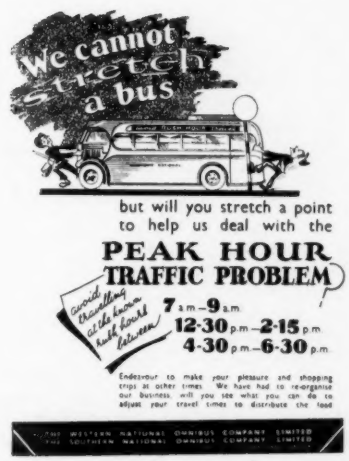
Travel on this bus if your journey takes less than an hour
Leave this bus for the long distance Passengers
LOCAL
LONG DISTANCE
If you are travelling a short distance do not board a long distance bus. People going a small part of the way sometimes prevent passengers from travelling who have to go long distances. Leave the long distance buses for the long distance passengers.
ISSUED BY WESTERN WELSH OMNIBUS CO. LTD.


ORANGE
ON WEDNESDAY, 30th APRIL, 1941, the ORANGE daily service linking Newcastle, Jarrow, Sunderland, Darlington, Catterick, Boroughbridge, Newark, Stamford and Biggleswade with London ceased to operate for reasons of national economy.
Established in the year 1927, these day and night motor coach journeys have since been regularly provided. With the advent of fuel rationing the night service was discontinued and a greatly reduced daily service operated.
Approximately three million miles were run and 176,000 passengers per annum travelled by these convenient, comfortable and reliable services, and even war-time restrictions could not change the habits of the travelling public since seats in the limited number of coaches allowed have been fully occupied and many would-be travellers disappointed through inability to secure travel accommodation. Many will deplore that the Company has had no alternative but to accede to the instructions to withdraw this convenient system of coach travel.
A word of appreciation is accorded to the drivers as they have safely steered the coaches through sunshine, through thick fog, along snow-bound and ice-bound roads and in the thick of a "blitz" on London, for on numerous occasions a "blitz" was in progress either upon arrival or departure. Not on any one occasion did they fail to complete the journey into or out of London in spite of these difficult conditions, and whether it lie in fog or blackout the service has been operated, generally speaking, to scheduled time.
We look forward to the brighter days of the future when we can reinstate in part or in whole this coaching service which by its goodwill has established a demand eagerly awaiting the days when freedom of travel can be restored
UNITED
AUTOMOBILE SERVICES, LTD.
Head Office: GRANGE ROAD DARLINGTON

YOU'LL GET ON QUICKER BY QUEUEING
When waiting for a bus, form a queue with your fellow travellers. This will help everybody to get on the bus quicker, is less dangerous, and absolutely fair. If the first three or four people line up, others will follow suit. Try it!
ISSUED BY WESTERN WELSH OMNIBUS CO. LTD.

TRAVELLING IN WARTIME
YOUR TROUBLES—and OURS—
There are fewer buses on the roads. Those that are running are often overcrowded. You sometimes have a long wait for the next bus, and when it comes there is no room for you.
THE CAUSES—
The supply of motor fuel has been restricted. Our staff is depleted. In some districts the population has greatly increased. The demands of the military authorities must be met. More workers' services must be provided. Many people have not adjusted themselves to the new conditions and continue to travel when it suits them and not when it is most convenient from the traffic point of view.
YOU CAN HELP—
BY travelling, whenever possible, only when you know that traffic is quiet—Avoid the Rush Hours—this applies particularly to shoppers and those on pleasure bent.
BY showing patience when the bus is crowded and you cannot get a seat—take your turn.
BY showing indulgence toward women conductors and assisting them in carrying out their duties—tender the exact amount of the fare whenever you can.
BY remembering that in time of war our watchword must ever be—
WORKERS COME FIRST
ISSUED BY NORTH-WESTERN ROAD CAR CO. LTD. STOCKPORT


STUDY BUSOLOGY
READ THESE HINTS AND
TRAVEL UNDER THE BEST CONDITIONS
1. If possible avoid travel between 6 and 9 a.m. or between 4-30 and 6-30 p.m.
2. When necessary queue-up and take your turn.
3. If a short-distance passenger endeavour to travel by a short-distance bus in preference to a "through" bus.
4. Assist conductor by tendering the exact amount of your fare and stating clearly the place at which you need to alight.
5. If previous buses have passed you by or if your bus is late don't abuse the conductor—he probably cannot help it. Instead, either report the facts to an inspector or write to the Company.
6. Don't forget that whilst the Company's efforts to serve you are unremitting, its ability to do so is severely restricted (a) By the necessity to use the minimum quantity of fuel and (b) By having to provide services under the heavy handicap of staff shortage.
7. Remember that owing to the factors mentioned duplication of services cannot be guaranteed at any time.
8. Avoid last buses, you may be crowded out at a time when duplicate vehicles are not available.
ISSUED BY
RIBBLE MOTOR SERVICES LTD.


We cannot stretch a bus
but will you stretch a point to help us deal with the
PEAK HOUR TRAFFIC PROBLEM
avoid travelling at the hours mentioned between
7 a.m.–9 a.m.
12-30 p.m.–2-15 p.m.
4-30 p.m.–6-30 p.m.
Endeavour to make your pleasure and shopping trips at other times. We have had to re-organise our business, will you see what you can do to adjust your travel times to distribute the load
THE WESTERN NATIONAL OMNIBUS COMPANY LIMITED
THE SOUTHERN NATIONAL OMNIBUS COMPANY LIMITED

Six representative wartime newspaper advertisements of railway-associated bus companies

drums and planks, worked by cable at night; they are dismantled in daytime and can be reassembled quickly and their number multiplied as traffic demands. There are also thousands of maintenance coolies spread along the road to repair earthwork damage—whether from bombing or due to landslides—in incredibly short periods of time. When the road was first reopened last October, only about 40 lorries went through each way daily, carrying some 100 tons in addition to petrol. By the middle of January, however, 160 lorries, carrying some 450 tons, were on the move each way daily. The quantity of petrol carried is considerable and the lorries ply in convoys.

Trailer Buses in Germany

A new motorbus-trailer service has been inaugurated in Berlin, according to the *Berliner-Börsen-Zeitung* of January 19 last, connecting the railway stations of the two suburbs of Grünau and Bohnsdorf. The bus trailer has a seating capacity for 34 passengers and standing space for 10 additional persons. It is stated to be a light two-axle vehicle, equipped with good springs which permit quiet and comfortable riding. Radiators and ventilators have been installed to ensure warmth and fresh air at all times. Folding doors, operated with compressed air, can be opened by press-button from either end of the vehicle. The entrance to the trailer is at the rear and the exit at the front. It is claimed that important technical improvements have been made in the coupling device to avoid jerks in starting and stopping, and also to prevent gliding and skidding. If present plans are carried out, "trailer trains" will be placed in service on other long suburban routes to accommodate an overflow of passengers travelling between distant suburbs and railway stations in the city.

Loading and Unloading Time Limits in Germany

The time limit for road vehicles for loading or unloading 1,000 kg. (the metric ton of 2,205 lb.), has been fixed by the Reich authorities at 20 min., beginning with the moment when the vehicle arrives at the loading or unloading station. In the case of loading, the time limit runs from the moment set for the beginning of the operation. If loading or unloading is undertaken at several places for the same consignor or consignee, the time limit runs from the moment the vehicle arrives at the first loading or unloading station. There is no time limit for loading and unloading on Sundays, holidays, and on working days between 8 p.m. and 7 a.m. unless lorries are specially ordered to report at such hours. The time limit for loading and unloading is also suspended during periods when work is interrupted by events, such as air raids, beyond the control of the consignor or consignee. An extended time limit is provided in the case of goods which by their nature requires a longer time for loading or unloading, as for example, cigarettes, canned goods, etc., which are packed in small parcels.

Road Vehicle Examination in Germany

A recent order of the German Minister of Transport provides for the examination at least once a year of all motor lorries with a capacity of more than 1·5 metric tons, as well as of all trailers and tractors. A special Examination Board was appointed to set up regulations governing such inspections, and all vehicles examined are placed in one of five categories, depending on the state of repair or condition of the vehicle. The examinations are made by experts who give certificates of condition. From time to time road controls are made to ascertain if adequate examinations have been made. The purpose of these measures is to increase the useful life of motor vehicles and to ensure better service, especially on short-distance hauls.

Slovak Railway Road Services

The Slovak State Railways maintain 26 bus services with a total length of 819 km. (509 miles), an inheritance from the activities of the former Czechoslovak State Railways. The road transport fleet at the end of 1940 included 12 passenger cars, 105 buses, 102 motor lorries, and 12 trailers, maintaining 48 passenger services (bus and coach) with a total mileage of 1,800 km. (1,118 miles) and 8 motor lorry services totalling 298 km. (185 miles). Plans for 1941 provide for the increase of these activities by about 90 per cent., and the construction of garages for the new road transport fleet it is hoped to obtain

Swedish Gas Buses

There is considerable activity in Sweden in converting petrol buses and lorries to wood- and charcoal-burning producer-gas propulsion, and in November of last year the total number had reached 18,225, including nearly 5,000 taxis and private cars. Over 30 per cent. of the lorries, 28 per cent. of the buses, and 18 per cent. of the private cars, were then operating on producer gas. But the latest figures indicate an astonishing rate of progress, in that by the end of March of this year 45,000 vehicles, or 90 per cent. of the road vehicles in the country, were operated on producer gas; 60 per cent. of these used charcoal and 40 per cent. wood.

Producer-Gas in Brazil

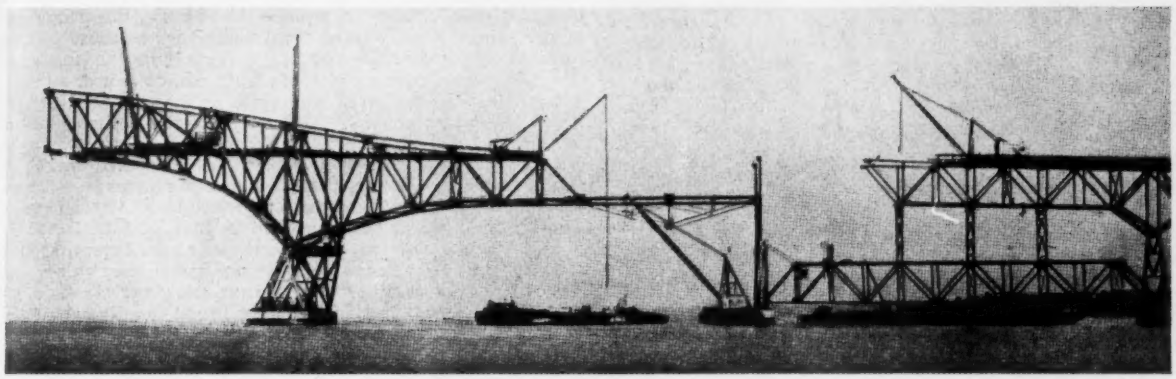
A Brazilian law of August 23, 1940, stipulated that, for each group of 10 commercial vehicles owned, one must be producer-gas driven. By official order of January 25, 1941, the Minister of Agriculture now requires all commercial-vehicle owners to comply within a period of six months dating from January 15, 1941. Producer-gas equipment is now being made in Brazil.

New Buses for the Western Welsh

THE view alongside, taken recently at Cardiff, shows one of two new A.E.C. Regents recently delivered to the Western Welsh Omnibus Co. Ltd., an associate of the G.W.R. They are part of an early war order for 15. Since the early 1930's the Western Welsh fleet has contained numbers of Southall-built buses both double-deckers and single-deckers. The new Regents, powered by 8·8 litre direct injection oil engines, are fitted with Eastern Coachworks standard composite, low-bridge type bodies. Each seats 56 passengers, 26 in the lower and 30 in the upper saloon. Seats are of tubular pattern, and have Dunlopillo cushions and rubberised hair squabs. Upholstery is in red moquette, with leather edgings and red and black repp for the seat backs. For the side lining panels and the front bulkhead to seat level, leather cloth is used. Ceilings in both saloons are enamelled white. Special accommodation is provided for luggage beneath the stairs, and behind the rear nearside seat in the upper saloon. Four Ashanco extractor type ventilators are fitted, and these are supplemented by 12 drop windows, three on each side of both decks. All the side windows have continuous metal louvres. Lighting is provided by Taw type lamps with semi-flush open reflectors, and provided for wartime purposes with B.M.A.C. masks.

TWO-MILE POTOMAC ROAD BRIDGE

A description of the superstructure and methods of erection of this cantilever and Wichert-type girder bridge connecting Maryland with Virginia



General view of erection of (left) cantilever and anchor spans by balancing on A-shaped pier trestle with temporary diagonal bent to its right, and showing temporary king-post truss (centre). On the right is one of the Wichert truss spans being erected from service girder resting on pier caps

THE recently-completed 10,050-ft. road bridge over the Potomac river, connecting Maryland with Virginia, U.S.A., about 50 miles below Washington, was briefly described in our issue of February 21 (page 200) and we now give some further details.

The 800-ft. curved-chord cantilever span of this structure—known as the Ludlow Ferry bridge—allows of a clear headway of 140 ft. for shipping. On the Virginia side of it are one of the 367-ft. anchor spans, six Wichert truss deck spans (2 × 350 ft. and 4 × 276 ft.) and six Wichert plate girder spans (2 × 117 ft. and 4 × 162 ft.), also 60 ordinary plate girder spans of about 60 ft. On the Maryland side are the other similar anchor span, 4 Wichert truss spans (2 × 350 ft. and 2 × 276 ft.) and six Wichert plate girder spans (2 × 117 ft. and 4 × 162 ft.). The cantilever and anchor spans measure 45 ft. between trusses, whereas the Wichert trusses and plate girders are 22 ft. and 21 ft. respectively between centres. The Wichert type of bridge girder was described on page 356 in our issue of October 4 last.

The girders on the Maryland bank were hauled by rail and tractor to site, but all others were brought there by water. The 60-ft. spans, which, like most of the Wichert plate girder spans, are supported by single pile bents or trestles, were placed in position by floating derricks. The Maryland approach Wichert plate girder spans, being on the river bank, were erected by two long-boom crawler cranes capable of lifting an assembled girder member. A temporary vertical post over each leg of the trestle, equipped with an adjusting jack, was used to divide each of the rhomboid end panels into two rigid triangles during erection.

Erection of Cantilever and Wichert Truss Spans

Owing to the depth of water, pile falsework could not be used for erecting the Wichert truss deck and cantilever spans over the channel. Also floating equipment was inadvisable owing to the wide expanse of open water making frequent and severe squalls a danger. Moreover, many of these spans had to be raised so high that floating them into position already assembled on barges, especially with rhomboidal end panels, was considered dangerous and impracticable. It was therefore decided to erect the cantilevers by the balancing method, and to float out service girders (or falsework trusses) to rest on the pile caps, and to erect the Wichert truss spans on them.

In erecting the cantilevers—which rest on piers consisting of a triangular trestle frame carried by caissons founded on piles—a temporary diagonal bent from the base of this frame to the first panel point of the anchor span took the balancing load at variable compression and tension stresses and insured stability during erection. A 300-ton jack under each truss, built into this temporary bent, was used to adjust the inclination of the anchor arm for final closure. Erection proceeded symmetrically from the pier outwards in each direction, balance being maintained by means of a strain gauge extensometer showing the amount and direction of stress in the temporary bent. To steady the structure under erection as it got further out from the pier, a temporary horizontal king-post truss, 136 ft. in length, was used to connect the bottom boom with the anchor arm pier trestle bent; otherwise squalls might have endangered erection and the structure. This king-post truss, the diagonal bent, and the Wichert span under erection on the service span are seen in the illustration above.

800-ft. Span Erected by Cantilevering

The central 400 ft. of the main 800-ft. span is designed as a suspended span, but for erection purposes it was treated as a rigid portion of the cantilever, one half being erected with each arm.

For the erection of the last three Wichert truss spans with insufficient headroom for a normal service span, and to avoid provision of a specially designed one, the first of the three, a 275-ft. span, was erected on a wagon-ferry barge and floated into position. The next, a 350-ft. span—between two 275-ft. spans—was erected by cantilevering out from the adjacent spans. A temporary vertical jacking post in each rhomboid—capable of jacking against both tension and compression loads—was used to insure correct closure.

The width of the roadway over the bridge is 24 ft., and there is an 18-in. emergency sidewalk at each side of it. The road rises from the banks to the 800-ft. span with a gradient of 1 in 27; the roadway is paved with concrete.

This great bridge was designed and its construction supervised by the J. E. Greiner Company of Baltimore, represented by Mr. W. H. Pahl, Project Engineer, and Mr. R. Archibald, Resident Engineer. The steelwork was fabricated and erected by the Harris Structural Steel Company of New York. For these particulars and the illustration we are indebted to our American contemporary *Engineering News-Record*.

XUM

Overseas Notes

Fourth Pan-American Highway Congress

The Mexican Government has invited the 21 American Governments, members of the Pan-American Union, to send official delegates to the Fourth Pan-American Highway Congress and the Second Inter-American Travel Conference, which are to be held concurrently in Mexico City from September 15 to 23. Members of associations and other organisations interested in the development of international highways and tourist travel have been invited to visit Mexico and attend the sessions of both the Highway Congress and the Travel Conference.

King's Cross (Sydney) Traffic Tunnel

After lengthy negotiations between the New South Wales Government and the Sydney City Council, the Government has decided to proceed with the construction of a tunnel, 1,580 ft. long and 50 ft. wide, to relieve traffic congestion at King's Cross, Sydney. In addition, it is intended to afford protection as an air-raid shelter. The City Council is to provide £87,500 or alternatively to defray a quarter of the cost of construction, whichever is the smaller amount. The Australian Commonwealth Government had agreed to purchase the spoil, about 140,000 c. yd., at a price to be fixed, in connection with the new graving dock works. The balance of the cost would be met by the State. The route of the tunnel starts at Cathedral Street, just beyond Hyde Park, and the eastern approaches terminate at New South Head Road, Rushcutters Bay. The width will provide for four lanes of vehicular traffic, while the height will be ample to accommodate double-deck buses. It is estimated that a period of twelve months will be required to complete the work.

Double-deck A.E.C. Regent, one of six owned by the Great Northern Railway (Ireland), loading up at Eden Quay, Dublin, on the Howth service

B.A. Transport Sued by C.H.A.D.O.P.Y.F.

The C.H.A.D.O.P.Y.F. Company is bringing an action against the Buenos Aires Transport Corporation for the payment of 130,000,000 pesos which, the company claims, is due to it under the terms of the appropriate law, and is also demanding the reimbursement of the value of the shares, which it alleges is still owing by the corporation. As reported in THE RAILWAY GAZETTE of November 8, 1940, the company (Compañia Hispano-Argentina de Obras Públicas y Finanzas), a Spanish syndicate which constructed the Buenos Aires underground line from Retiro to Plaza Constitución and is at present engaged on the construction of three other underground lines, had suspended interest payments on its 7 per cent. debentures, on the grounds that the transport corporation had not fulfilled its promise to advance the necessary funds. The company states that, owing to the failure of the corporation to comply with its undertaking, the financial situation of the concern is going from bad to worse, as it is left without the resources wherewith to meet its obligations to the debenture holders. The company also calls attention to the disparity in the valuation of its property, which it estimates at some 131,000,000 pesos, as compared with the corporation's assessment of 88 millions, a difference of some 43 millions. It points out that the price of $3,500,000 pesos a km. of track, which has been fixed for the C.H.A.D.O.P.Y.F. lines, is barely half that placed on the Anglo-Argentine and Lacroze systems, which are valued at $6,870,000 a km., and that there is no justification for such a difference in valuation.

North China Road Services

There are now 172 road motor services in North China covering a mileage of 12,398. They are worked under the various Divisional Superintendents of the North China Railway as follow :—

Service lines	Mileage	Railway Divisional management
37	2,565	Tientsin
34	2,113	Peking
55	4,509	Tsinan
18	1,410	Taiynan
28	1,801	Kaifeng
172	12,398	

The North China Transport Company was established at Peking on April 17, 1939, to take over from the South Manchuria Railway the operation of rail transport services in North China and Inner Mongolia, and to provide other transport facilities in North China. The company is a subsidiary of the monopolistic Japanese-controlled North China Development Company. Its road transport interests comprised motorbus and lorry services totalling some 11,000 km. (6,835 miles) at the end of September last. These seem to be worked at a loss, for figures in respect of the financial year 1940 indicated motor transport gross revenue of $11,288,782, against operating expenditure of $14,612,157. By reason of railway net receipts, the company showed a small net profit for the year.

Maas Tunnel at Rotterdam

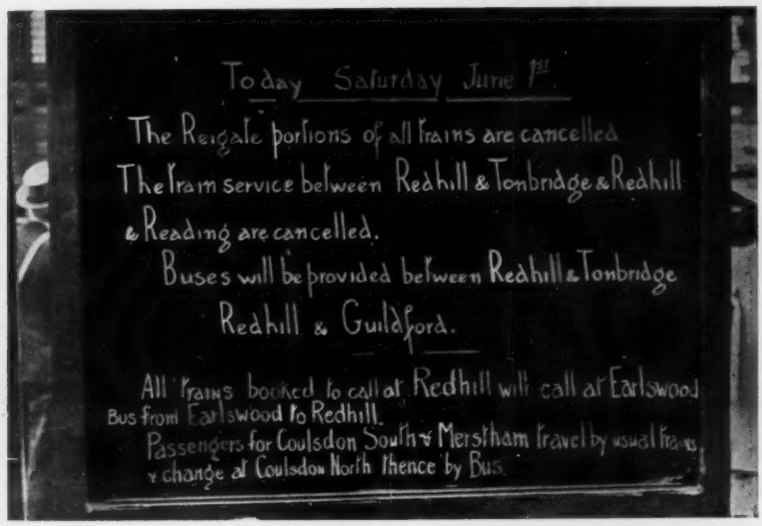
Construction of the new road tunnel under the River Maas at Rotterdam, mentioned at page 768 of our May 31, 1940, issue, has not been much delayed by war circumstance, according to a letter from the Tunnel Engineer, Mr. J. P. Van Bruggen, published in *Engineering News-Record* for March 13. The last of the nine river caissons, he says, was sunk in December last.

The Burma Road Traffic

Traffic on the Burma Road, which is now proceeding without serious interruption by Japanese aircraft, consists mainly of petroleum products, cotton yarn, piece-goods, rice, and railway and building materials and equipment, flowing into China ; and of tin, tungsten, tung oil, nut galls, sausage casings, bristles, hides and skins, herbal medicines, and Szechwan silk, largely consigned to America, from China. Reference to rapid improvised war-damage repair on the Burma Road is made in some notes on pages 653 and 654 of this issue.

British Railways and the War—73

Right: The return of the troops from Dunkerque. Between May 20 and June 4, 1940, the British railways conveyed no fewer than 319,056 officers and men in 620 special trains run from south eastern ports to various parts of the country. At every stop the trains were besieged by voluntary helpers and photographers


Today Saturday June 1st
The Reigate portions of all trains are cancelled
The tram service between Redhill & Tonbridge & Redhill & Reading are cancelled.
Buses will be provided between Redhill & Tonbridge
Redhill & Guildford.
All trains booked to call at Redhill will call at Earlswood
Bus from Earlswood to Redhill.
Passengers for Coulsdon South & Merstham travel by usual trains & change at Coulsdon North thence by Bus.

Left: The Southern Railway had to improvise services for its regular passengers, and this notice board indicates something of the special arrangements which were made at Redhill junction, which was the focal point of the emergency services

Right: Emergency catering arrangements at Redhill junction, where the trains followed each other in quick succession

Left : Behind the scenes with the cooks in a railway goods yard

Right : Voluntary helpers providing light refreshments to the returning troops at a sleepy countryside station which had never previously known such heavy traffic

Below : Another view of the scene at Headcorn junction. Kent & East Sussex line will be noticed curving away to the right

RAILWAY NEWS SECTION

PERSONAL

Sir George E. Schuster has been co-opted a director of the Southern Railway Company in place of the late Sir Charles Morgan. Sir George E. Schuster is chairman of Allied Suppliers, and a director of the Westminster Bank, and a number of industrial undertakings.

Mr. C. E. Simmons, Vice-President & Secretary, New York, Ontario & Western Railway, has been elected Chairman of the board and President of the company, in succession to Mr. E. G. Buckland, who has been Chairman since 1929.

Spanish Railway Appointments

Señor Gregorio Perez Conesa has been appointed, by a Decree of February 22 last, President of the Council of Administration of the Spanish National Railway System. By the same Decree the following members of the Council are appointed: nominated by the Ministry of Public Works, Sres. Horacio de Azqueta and Nicolas de Salas; nominated as railway technicians, Sres. Pedro Gonsalez Bueno and Eduardo Alfonso; nominated by the Ministry of Finance, Sres. Enrique Calabia and J. M. de La Puerta; by the Ministry of Defence, Sr. J. M. Rivero de Aguilar; by the Ministry of Agriculture, Sr. L. Justiniano; and by the Ministry of Industry and Commerce, Sr. Ignacio Muñoz. Señor Perez Conesa was previously the Director of the State Railway Department. Señor Alfonso was for several years General Manager of the Madrid, Zaragoza & Alicante Railway.

Lord Rockley, whose death was recorded in The Railway Gazette of April 4 and who was formerly a Director of the Southern Railway Company, has left £92,780.

We regret to record the death in America of Mr. Arthur Curtis James, at the age of 74. He was chairman of the Western Pacific Railroad and president of the Curtiss Southwestern Corporation.

Mr. James Wild, Manager and Omnibus Engineer of the Todmorden Joint Omnibus Committee (Todmorden Corporation and the L.M.S.R.), is retiring owing to ill health after 20 years of service.

Sir Cyril Hurcomb, K.C.B., K.B.E., who, as was recorded in The Railway Gazette of May 16, has been appointed Director General of the new Ministry of War Transport, was born in 1883, and received his education at St. John's College, Oxford. In 1905 he entered the service of the Post Office in the Surveyor's Department, and in the following year was transferred to the Office of the Secretary. He became Private Secretary to the Permanent Secretary in 1910, and Private Secretary to the Postmaster General in 1911. He was later Deputy Director, and subsequently Director of Commercial Services of the Ministry of Shipping. Sir Cyril joined the Ministry of Transport on its formation in 1919 as Assistant Secretary in the Finance, Rates, and Statistical Department, and became Permanent Secretary of the Ministry in 1927; he was President of the Institute of Transport in 1935-1936. In May, 1937, he was appointed an Electricity Commissioner, and became Chairman of the Electricity Commission at the end of that year. On the formation of the Ministry of Shipping in 1939, Sir Cyril Hurcomb was appointed Director General, a position which he held until his recent appointment to the Ministry of War Transport. He was decorated with the C.B.E. in 1918, the C.B. in 1922, the K.B.E. in 1929, and the K.C.B. in 1938.

[Elliott] [& Fry

Sir Cyril Hurcomb, K.C.B., K.B.E.
Appointed Director General, Ministry of War Transport

Mr. H. Tandy who, as recorded in our issue of May 16, has been appointed District Goods Manager, Bolton, L.M.S.R., entered the service of the London & North Western Railway Company at Sandbach, and after working in various positions, in 1920 was appointed Outdoor Assistant to the District Traffic Superintendent, Chester & Holyhead District. In 1925 he became Commercial Assistant in the Leeds District, and in 1927 Operating Assistant in the Manchester District. He was appointed Assistant Irish Traffic Manager, in 1929 and in 1930 Goods Agent, St. Pancras and Somers Town, which included the supervision of the coal yards of St. Pancras Wharf, Somers Town Old, Somers Town New, St. Pancras Road, and Camley Street. He held this position until his recent appointment. While in London Mr. Tandy was Chairman of the Committee of the London Midland Athletic Club and was also a co-opted member of one of the London County Council Education Committees in the Borough of St. Pancras. He commanded the Home Guard in the St. Pancras area, including the Passenger Station and the L.M.S.R. Hotel.

We regret to record the death on June 6 of Thomas J. Potter, late of the Travellers Insurance Association.

Mr. J. Auld, Principal Assistant to the Chief Mechanical Engineer, Great Western Railway, is retiring on July 5, after nearly 54 years' railway service. He served an apprenticeship on the Glasgow & South Western Railway, and subsequently held appointments on the Great North of Scotland Railway and on the London, Tilbury & Southend Railway prior to its absorption by the Midland Company. Returning to the Glasgow & South Western Railway, he was appointed District Locomotive Superintendent at Glasgow, and in 1910 was appointed Locomotive Superintendent of the Barry Railway. On the amalgamation of the Barry Railway Company with the Great Western Railway Company, Mr. Auld was at first appointed Mechanical Engineer at Barry Docks and Divisional Locomotive Superinten-

Mr. J. Auld

Principal Assistant to Chief Mechanical Engineer, G.W.R. 1932-1941.

Mr. F. C. Hockridge

Appointed Deputy Surveyor and Estate Agent, G.W.R.

Mr. H. A. G. Worth

Appointed Assistant Divisional Superintendent Birmingham, G.W.R.

dent for the Cardiff Valleys division, but in September, 1922, he became Docks Assistant, and in January, 1924, Docks and Personal Assistant to the Chief Mechanical Engineer of the Great Western Railway, becoming Principal Assistant in January, 1932.

Mr. F. C. Hockridge, who, as announced in our May 30 issue, has been appointed Deputy Surveyor and Estate Agent, Great Western Railway, is a native of Cardiff. He has been in the railway service over 38 years, having commenced his career in the Secretary's office of the Taff Vale Railway; at the time of the passing of the Railways Act of 1921 he held the post of Chief Clerk to the Secretary of that company. Mr. Hockridge remained at Cardiff until February, 1924, when he was transferred to the Secretary's Office at Paddington, where he was responsible for estate and kindred matters in that department. In January, 1926, he was appointed Secretary of the Fishguard & Rosslare Railways & Harbours Company, and held that post until 1929, when he was appointed Assistant to the Surveyor. He was appointed Assistant Surveyor and Estate Agent in 1931. In addition to his Fellowship of the Chartered Surveyors' Institution, Mr. Hockridge has been a Fellow of the Chartered Institute of Secretaries and the London Association of Accountants for 22 years.

Mr. H. A. G. Worth has been appointed Assistant Divisional Superintendent, G.W.R., at Birmingham. He entered the company's service in 1913, when he was attached to the Engineer's Office at Paddington, and transferred towards the end of 1919 to the office of Superintendent of the Line where he was engaged on various duties. Four years later he took up duties in the Divisional Superintendent's office at Paddington and returned to the Office of Superintendent of the Line in November, 1930, in the commercial advertising section. Three years later Mr. Worth was appointed Junior Assistant to the Divisional Superintendent at Newport and in July the following year he was appointed Trade

Mr. H. E. Roberts

Representing the R.E.C. in U.S.A. to advise on cargo loading.

Mr. T. V. Nicholson

Accompanying Mr. Roberts in his mission to the United States.

Mr. F. E. Bailey

Appointed District Passenger Manager, Euston, L.M.S.R.

Advertising Agent at Paddington attached to the Office of Superintendent of the Line. Mr. Worth resigned this post at the end of 1936 to take up an appointment in the Commercial Advertising Department of the London Passenger Transport Board and he has now returned to the Great Western Railway Company to assume his new post at Birmingham.

Mr. H. E. Roberts, District Passenger Manager, Euston, L.M.S.R., is representing the Railway Executive Committee in the United States, where he will keep in touch with and advise on the loading of cargoes for Great Britain, bearing in mind their destinations in this country. Mr. Roberts entered the head office of the Lancashire & Yorkshire Railway at Manchester in 1902, and was appointed Goods Agent successively at Nelson and Bury in 1910 and 1913. During the war he served from early 1915 until 1918, latterly with the rank of Major, and as Deputy Assistant Director of Railway Transportation. In 1920 Mr. Roberts was appointed Assistant District Goods Manager, Bolton, and was promoted to be District Goods Manager of the new Derby District, L.M.S.R., in October, 1931, which post was, under the reorganisation scheme, absorbed in the new appointment of District Goods and Passenger Manager, Derby, the position he held until his appointment to Euston in June, 1935. He is an officer of the Order of St. John of Jerusalem, and holds the rank of Colonel in the Home Guard.

Mr. T. V. Nicholson, head of the Passenger Manager's Development Section, York, L.N.E.R., who is accompanying Mr. H. E. Roberts to the United States, was educated at Shrewsbury School and St. Edmund Hall, Oxford, where he took the degree of Master of Arts. He joined the L.N.E.R. in 1930 as Traffic Apprentice, and after experience in various departments became Assistant to the Mineral Manager, Southern Area in 1937; he was appointed head of the Passenger Manager's Development Section, York, in 1939. As a member of the Supplementary Reserve (Movement Control), he went to France shortly after the outbreak of war, where he remained until the evacuation of the B.E.F. in 1940. Subsequently he was engaged at the War Office. He received the rank of Captain in 1939 and of temporary Major in 1940.

Mr. F. E. Bailey, who has been appointed Acting District Passenger Manager, Euston, L.M.S.R., in the absence of Mr. H. E. Roberts, who is abroad on special Government service, was educated at Sir John Deane's School (A.D. 1557), Cheshire, and entered the service of the Lancashire & Yorkshire Railway in 1910. He served in various Departments of the District Superintendent's Office at Manchester and in the Goods Department at Trafford Park and Manchester Docks. He joined the Army shortly after the outbreak of the last war and was granted a Special Reserve Commission in the 3rd Battn. Manchester Regiment, serving in France with the 19th (4th City Pals) Battalion. In 1918 he was appointed to duty with the Royal Engineers, Docks Directorate, and served at Calais, Rouen, Cologne, and Rotterdam; at the last named in 1919 he was responsible for demobilisation arrangements and for food shipments into Germany *via* the Rhine. On resuming railway duties in 1920 he was engaged at Manchester Docks on the Ministry of Transport scheme for relieving congestion at the docks, and was later appointed Commercial Representative covering the Trafford Park area and shipping concerns in Manchester. He was appointed Goods Agent, Manchester Docks & Trafford Park in 1929, and Chief Canvasser, Manchester District, in 1932. In 1934 he was appointed Assistant to District Manager, Bolton, and has also been Assistant to the London District Goods Manager. After completing a special enquiry into the commercial arrangements in the London District Mr. Bailey was in 1936 appointed Sales Assistant to the Chief Commercial Manager at Euston, on whose behalf he organised the public relations arrangements throughout the system and undertook the training of the company's salesmen. On the opening of the L.M.S. School of Transport at Derby he was appointed Member of the School Council, and also Lecturer on "Railway Salesmanship."

We regret to record the death at Englewood, N.J., on April 9 of Dr. Robert Grimshaw, noted inventor and engineer in the mechanical field. Dr. Grimshaw, who was 91, retired at the age of 82 after a career of 60 years in mechanical engineering, during which time he developed a number of technical improvements in the railway industry. He was also a prolific writer on engineering subjects and was the first Editor of the magazine *Power*. His best-known work in the railway field was the "Locomotive Catechism," a 958-page handbook of questions and answers concerning practical operation and maintenance of the steam locomotive, which ran through 30 editions, the last of which was issued in 1923. Dr. Grimshaw was one of the founders of the American Society of Mechanical Engineers in 1880, and a member of a number of professional societies abroad.

Mr. John M. R. Fairbairn, of Montreal, a former Chief Engineer of the Canadian Pacific Railway, has been appointed Director of Works and Buildings, Naval Service. Mr. Fairbairn, who was born at Peterborough, Ontario, is a graduate of the University of Toronto. He joined the Canadian Pacific Railway Engineering Department in 1899, was appointed Chief Engineer in 1918, and held the post until his retirement in 1938.

The funeral of Lt.-Colonel H. H. Mauldin, Divisional General Manager, London & North Eastern Railway (Southern Area), took place at Old Knebworth Church on June 4. The Rector, Rev. L. Denton Sayers, officiated. Over a hundred persons were present at the church. In addition to the relatives those present were :—

Mr C. H. Newton, Chief General Manager (L.N.E.R.), and Mrs. Newton; Mr. J. E. Ryan, Hotel Superintendent, and Mrs. Ryan, and Mr. J. E. Sharpe, V. M. Barrington-Ward (Superintendent, Southern Area); A. L. Gibson (Passenger Manager); C. K. Bird (Assistant Divisional General Manager, also representing Divisional General Managers at Edinburgh and York); C. C. Dandridge (Advertising Manager); C. H. M. Elwell (Locomotive Running Superintendent, Eastern Section, also representing Mr. C. M. Stedman, North Eastern Area); G. Marshall (Goods Manager); L. P. Parker (District Locomotive Superintendent, Stratford); B. P. Fletcher (District Engineer, Stratford); L. H. K. Neil (London City Manager); G. Sutherland (Chief Accountant); R. R. Pettitt, Chief of Police (Southern Area); L. J. Moorcock (London District Passenger Manager); S. T. Brown (representing Secretary and Assistant Secretary); E. W. Rostern (Assistant Superintendent, Southern Area); R. Gardiner (Superintednent, Scottish Area); F. C. Wilson (District Superintendent, Stratford); H. M. Collings (District Goods Manager, Hertford); J. P. Allix (District Goods & Passenger Manager, Cambridge); G. Sutcliffe (District Superintendent, Cambridge); A. H. Rees (District Locomotive Superintendent, Cambridge); W. E. Green (District Superintendent, Knebworth); H. F. Pallant (District Superintendent, Nottingham); W. Y. Sandeman, M.C. (Assistant Engineer, H.Q.1, also representing Mr. R. J. M. Inglis (Engineer, Southern Area)); F. C. Scott (representing Chief Legal Adviser); O. H. Corble (Assistant to Chief General Manager); C. B. Tidmarsh (Estate Surveyor); E. F. Greenfield (District Superintendent, Norwich); M. D. Robinson (District Locomotive Superintendent, Neasden); A. L. Crewe, H. Kelland, A. E. Stukins, R. W. L. Davies (from the Divisional General Manager's Office, Cambridge); Mr. & Mrs. P. Randall, also representing Lt.-Col. F. G. Randall, Messrs. S. V. Harcourt, F. C. Sell, Jas. Hilton, Miss Wadham, Messrs. G. S. Carter, J. L. Meadowcroft, A. J. White, F. C. Ley, representing Mr. A. P. Ross (from H.Q. 1); Chas. Hewitt, B. Wagenrieder, P. Cartwright, H. C. Johnson (Assistant to Superintendent), Mrs. H. C. Johnson, Miss W. Biggs, Miss Peggy Watts, Mrs. B. A. Pettit, Messrs. H. Hancock (Trains Assistant to Superintendent), S. T. Rayner, H. C. Webster, Stan. W. Frost (also representing Great Eastern Amateur Athletic Association) (from the Superintendent's Office, Shenfield); W. R. Jenkinson, F. W. Prentice, E. W. Eastop, A. C. Brown, W. V. Sowter, H. R. Porter, A. P. Phillips, J. H. W. Coggins, S. S. Jenkinson, G. Corbell, S. W. Tiffin (from the Passenger Manager's Office, Gordon Hill).

We regret to record the death of Mr. Dennis Ross-Johnson, at the age of 81. Mr. Ross-Johnson was Traffic Manager, Madras Railway Company, 1901-6; Secretary to the Indian Railway Conference Association, 1906-11, and General Manager & Secretary, Port of Bristol, 1911-28.

We regret to record the death of Mr. Ernest Remnant, a director of the Manx Electric Railway and of the West Riding Automobile Co., Ltd.

TRANSPORT SERVICES AND THE WAR—94

Whitsun holiday travel—Anniversary of Dunkerque evacuation—Control of agricultural traffic—U.S.A. railwaymen's gift to R.A.F.—Nominated loadings of goods trains—Transport in Holland—Trans-Saharan Railway—Ministry of War Transport organisation

No extra trains were advertised by the British railway companies for the Whitsun holiday period and although certain services were duplicated, as is customary when traffic conditions require it, most passenger trains were well filled and some were crowded. On May 27 the railway companies announced that ordinary timetable services would operate on the Friday, Saturday, and Sunday of the holiday, and that there would be restricted services on the Bank Holiday. On the last named day workmen's tickets were issued as on ordinary weekdays. Managements of factories and works not closing for the public holiday were advised to get in touch with local railway officials to ensure that adequate service would be available, and it was stated that arrangements would also be made for goods depots to be opened for delivery of perishable traffic, and at the request of traders, for the collection or delivery of urgent traffic.

Two advertisements which were inserted in the daily press by the Ministry of War Transport urged holiday makers not to travel. Reports from various parts of the country showed that generally the public responded well to the injunction to avoid unnecessary long distance movement and in many cases popular resorts reported a much smaller attendance of visitors than usual.

Visitors to Coastal Areas

On May 29 the Ministry of Home Security issued a reminder to intending holiday makers not to overlook the ban which has been placed on visits to the coastal areas of East Anglia, Kent, and Sussex. Only those who have business in these areas will be allowed to enter. Holiday, recreation, or other visits are not permitted. At all times identity cards should be carried.

Anniversary of B.E.F. Evacuation from Dunkerque

A year ago the successful evacuation from Dunkerque of more than 335,000 men, both French and British, had just been completed. At pages 657 and 658 we reproduce some pictures of the scenes at various points in the South of England during the movement of the men from the ports to their various stations. At the time of the movement it was not desirable to indicate the routes used, but, as may be seen from the photographs reproduced, an important centre in the movement was Redhill.

By reason of its geographical situation the main force of the movement fell on the Southern Railway and at the time it was called upon to bear this additional burden what would normally be regarded as heavy extra traffic was already being handled in accommodating the limited number of troops which it had been decided to withdraw from Flanders well before the surrender of the King of the Belgians. Between May 20 and early on May 27, 55 special troop trains were run from south-eastern ports and these in effect constituted part of the evacuation scheme. The main scheme, however, for which the Southern Railway had received instructions at 5 p.m. on Sunday, May 26, began at dawn on Monday, May 27. The first train left the coast at 7 a.m. and at 4 p.m. on Tuesday, June 4, the scheme ceased to operate. During the whole evacuation no fewer than 620 special trains conveyed 319,116 officers and men. No working notices were issued and the movement was directed by telephone. Moreover, when some of the trains left the south-east coast ports, their destinations were not known and these were settled by the military authorities by the time the trains reached key points.

To provide the necessary rolling stock, a pool was formed by the four main-line railways, which provided 186 trains as follow: G.W.R. 40, L.M.S.R. 44, L.N.E.R. 47, S.R. 55. This pooled rolling stock was worked under a system of a common user. It was decided to avoid London as far as possible, and therefore cross-country routes had to be worked out at short notice, and to accommodate in some cases an intensity of traffic for which they were not designed in peacetime. This resulted in a limited disturbance to normal passenger services, some of which had to be cancelled or diverted. In special cases it was even necessary to turn over for the exclusive use of military traffic particular sections of line and stations, but alternative road transport facilities were arranged for ordinary traffic.

" Nominated Loadings " of Goods Train Traffic

To speed up the transport of small consignments of goods train traffic which cannot be forwarded in through wagon loads, the British railways have decided to extend the system of " nominated loading "—that is, the arrangement of regular services of through wagons to certain destinations on specified days of the week. Notice has now been given by the Railway Executive Committee that, as from June 16, consignments of miscellaneous general merchandise of less than one ton will be accepted only on specified days of the week, or by the route of one railway, for conveyance to certain destinations or areas. The railways will advise traders of the destinations and the days of the week upon which such traffic will be accepted and the name of the railway to which the goods must be tendered ; in no case will the nominated days for despatch be less than two a week. Traffic between important towns will not be affected. This system of nominated loading operated in the last war with beneficial results and the railways feel that any measures which can be adopted to improve transit will be generally welcomed.

Control of Agricultural Traffic

The Controller-General of Transportation, Ministry of Supply, has taken over as from June 1 the control and planning of all traffic on behalf of the Ministry of Agriculture and the department of Agriculture for Scotland, and is also to facilitate the movement of all agricultural requisites passing through normal trade channels. The Controller-General is Mr. J. C. Patteson, European manager of the Canadian Pacific Railway. He was appointed in November, 1940, to create the new department to take responsibility for transportation of all raw materials and manufactured goods on behalf of the Ministry. Factory transportation officers are now at all large Royal Ordnance factories, controlling freight traffic and transportation of the workpeople.

The Department works in close co-operation with the Ministry of War Transport, railways, and road and canal carriers, and handles all the principal traffics of the Ministry of Works & Buildings. The agriculture traffics for which the department will be responsible comprise fertilisers, machinery, vegetable seeds, insecticides, fungicides, fencing, and wire netting.

U.S.A. Railways Gift to R.A.F.

Employees of the Baltimore & Ohio-Alton RR., through the medium of British railwaymen, have presented a cheque for $67,000 for the purchase of an R.A.F. flying ambulance. The cheque was formally handed to the New York representative of British Railways and the President of the British American Ambulance Corps by Mr. Willard, President of the Baltimore & Ohio Railroad, at an " Aid for Great Britain " concert recently held at Baltimore.

Sight-Seeing Tickets for the Forces

London Transport's 1s. sight-seeing ticket for members of H.M. and Allied Forces on leave in uniform may now be bought at the following Underground stations :

Liverpool Street (Metropolitan and Central London), Strand, Paddington (Metropolitan and Bakerloo), Baker

Street (Metropolitan and Bakerloo), Victoria, Euston, Waterloo, Piccadilly Circus, King's Cross, London Bridge, Euston Square, and Charing Cross. The ticket is also obtainable at the Forces Information Bureau, Trafalgar Square, and at a number of welfare centres and Service clubs in Central London. Tickets may be used from 10.30 a.m. until the last Underground trains and road vehicles of that day. Leave passes must be produced.

South African "War Train"

A special "war train" has been touring the Union of South Africa and Southern Rhodesia. It was staged by the Union Government to demonstrate by means of a variety of exhibits the different aspects of South Africa's war effort, and includes all kinds of munitions and armoured cars produced in Union workshops.

On May 27 the train arrived at Lusaka in Northern Rhodesia and was welcomed by the Acting Governor and Acting Chief Secretary to the Government. A message from Field-Marshal Smuts was read, stressing the common bond between the Union and the Rhodesians "both in peace and in the days of gigantic conflict." The Field-Marshal paid a tribute to the fighting qualities of the Rhodesians, adding that the war train would show them the great developments made by South Africa under the stress of necessity. South Africa today was a military camp and an arsenal. The message expressed the hope that the train would bring the two peoples into even closer contact.

Transport in Holland

On the Netherlands Railways goods and parcels rates were increased from February 10 last, ordinary goods by 23 per cent., parcels by 50 per cent., and wagon loads by 18 per cent. Passenger fares were revised from March 1, 1941. The then existing fares were on a sliding scale for single journeys, but not for returns. In the new fares the sliding scale is abandoned, and return journeys are increasing in price per km. for long distances. The following is a comparison of the old and the new fares :—

Fares in Cents per Km.

	1st	2nd	3rd
Old single fares :			
Up to 150 km.	4·25	3·25	2·25
Next 150 km.	3·18	2·43	1·68
Over 300 km.	1·59	1·21	0·84
New single fares :			
All distances	4·82	3·69	2·56
Old return fares :			
All distances	6·13	4·69	3·25
New return fares :			
Up to 50 km.	7·38	6·54	3·89
Over 50 km.	7·89	6·95	4·2

Only day return tickets are issued. 1 cent. per km. is the equivalent of ½d. a mile at the normal pre-war rate of exchange.

The Zeeland Steamship Company, which operated the Flushing-Parkeston Quay route, published its 1939 annual report early in 1941. It shows the following operating figures :—

	1938	1939	Decrease
Revenue	fl. 2,080,085 (£280,000)	fl. 1,575,376 (£210,000)	fl. 504,709 (£70,000)
Expenditure	fl. 1,514,223 (£200,000)	fl. 1,307,753 (£175,000)	fl. 206,450 (£25,000)

Normal services were in operation up to September 4, 1939. On that date the route to Harwich was closed, and from September 14 to November 25 a tri-weekly service between Flushing and Tilbury was maintained. This service was stopped on November 25 because of increasing operating deficits. Two modern steamships had been brought into service during the summer of 1939. In the war operations round Flushing after the German invasion in May, 1940, the company's head offices were destroyed, and one of the old steamers, s.s. *Princess Juliana*, was sunk by enemy action.

Travel Ban in Holland

It is reported by Reuters that the German authorities have prohibited unauthorised travel from the Hook of Holland southward to the Belgium border, and that a penalty of six months' imprisonment is to be imposed for infringement.

Train Service Cuts in Portugal

The Times reports that, owing to lack of coal the Portuguese railway services have been drastically curtailed. On the principal main line, between Lisbon and Oporto, for instance, where there were formerly two express trains a day there are now only four a week.

Germans Camouflage Railway Stations

It is reported that the Germans have adopted elaborate methods of camouflage as a result of the heavy Royal Air Force raids which have been made on Hamburg, Hanover, and Bremen, railway stations and other equally extensive targets are said to have been completely hidden under a canopy of timber rising on a ramp to form an artificial mound This has been covered with grass, rows of shrubs, creating from the air the effect of a road running through fields on the crest of a hill.

Balkan Rail Conferences

As recorded in THE RAILWAY GAZETTE, May 30 (page 608), conversations have begun between Turkey and Bulgaria for the re-establishment of rail communications between the two countries. Turkish railway traffic with Bulgaria and Central Europe has been suspended since the German invasion of Greece. The resumption of traffic would entail the reconstruction of the frontier bridge across the River Maritza, which was blown up by the Greeks at the opening of hostilities by Germany.

Trans-Saharan Railway

As we have already recorded (THE RAILWAY GAZETTE, March 21, page 354) the Vichy Cabinet has decided to begin work immediately on the construction of the Trans-Saharan Railway with a section of 125 miles from Kenadza to the mining basin of the Upper Guir. Much discussion has taken place in recent months in the foreign press on the Trans-Saharan Railway, which has been referred to as a link between Europe and its African "suburb," and a means of achieving "Euro-African autarchy." The scope of the scheme has been defined in a *Décret-Loi* of March 22 and in an official report to Marshal Pétain which accompanied it. The *Décret-Loi* made provision for the possible international extension of the railway, and it has been suggested that negotiation with "neighbouring Governments" and extension through Nigeria and Congo were envisaged. The report also spoke of the railway as the first step towards a Trans-African line though it emphasises its importance for French-Africa "the unity and consequently the power" of which is prevented by the desert of the Sahara. In an interview given to M. Jean Paillard and quoted in the *Temps* of March 24, Admiral Platon referred to the Trans-Saharan Railway as a true imperial enterprise capable of influencing French African policy, and the course of French foreign policy. It would, he said, lead to the cohesion of the French African territories which were not only an extension of France but the bridgehead of Europe in Africa. The Trans-Saharan-Trans-African Railway would form the final stage of a great commercial artery from the Rhine by way of the Rhône, Marseilles, Algiers, Niger, Congo, to the Cape, and would contribute to regaining for France the place that was her due. Another view which has been expressed in France is that the Trans-Saharan would give Germany access to the markets of Central Africa and would bring prosperity to the Niger region.

M. Berthelot, Vichy Minister of Communications, after a recent visit to North and West Africa, gave an interview to the press in which he urged that the name Trans-Saharan should be replaced by that of Mediterranean-Niger. The Trans-Saharan, he said, would ultimately form a link between Southern Algeria and Dark Africa, but this was not yet urgent. What was more important was the construction of the northern and southern antennæ of the Trans-Saharan Railway to link the coal mines of Kenadza and the Upper Guir with the ports. These mines at present produce 100,000 tons a year and have a potential production of a million tons. It was hoped that the line from Bou-Arfa to Kenadza would be completed by the end of this year, after which subsidiary lines and the 125-mile stretch between Colomb-Bechar and Beni-Abès would be undertaken. The next task would be to build the In Tassit line to carry phosphates to the navigable part of the Niger just west of Goa, and to ensure the connection between the Segu region and the line running from

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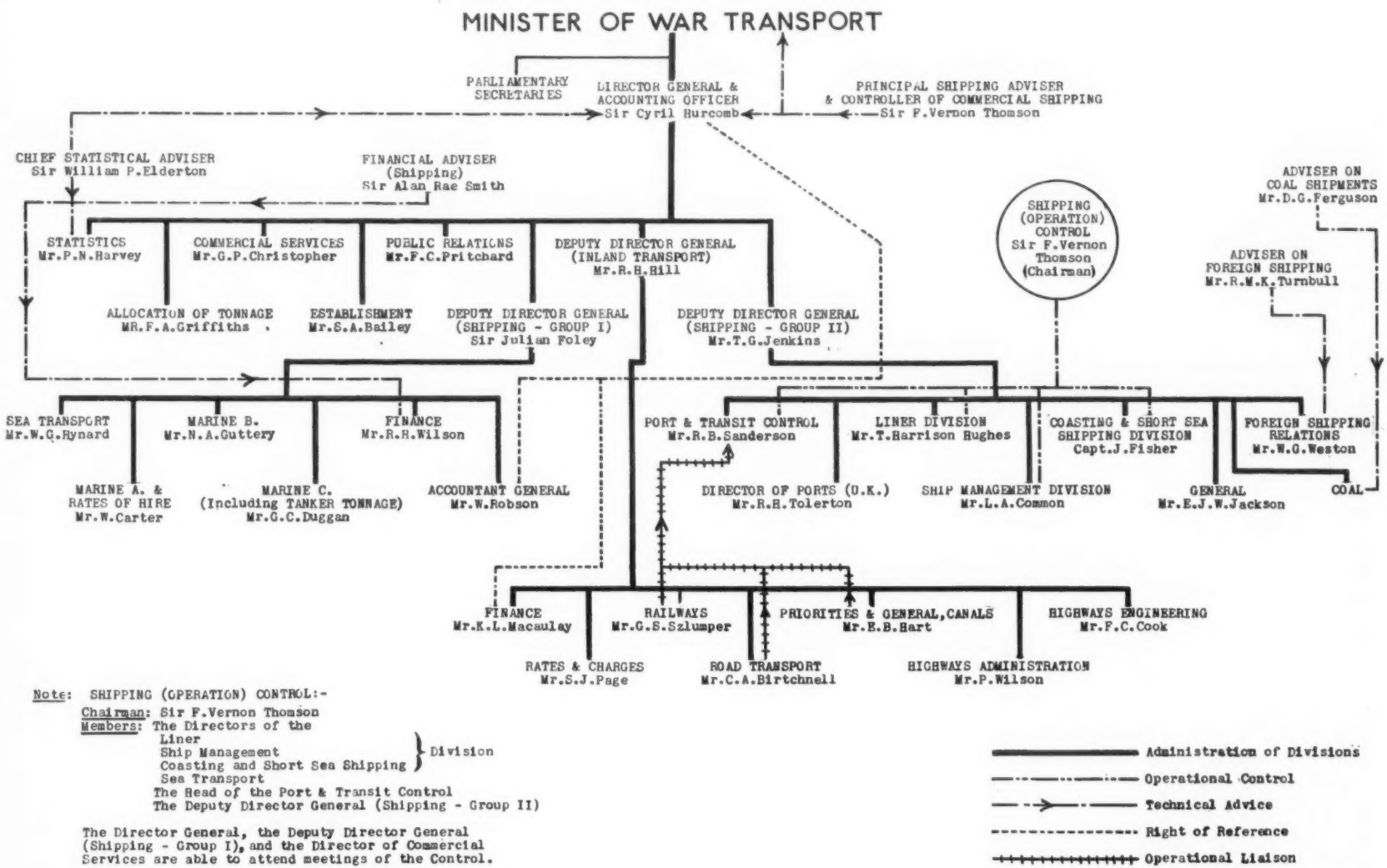
Ministry of War Transport: Organisation Chart


MINISTER OF WAR TRANSPORT
PARLIAMENTARY SECRETARIES
DIRECTOR GENERAL & ACCOUNTING OFFICER Sir Cyril Hurcomb
PRINCIPAL SHIPPING ADVISER & CONTROLLER OF COMMERCIAL SHIPPING Sir F.Vernon Thomson
CHIEF STATISTICAL ADVISER Sir William P.Elderton
FINANCIAL ADVISER (Shipping) Sir Alan Rae Smith
SHIPPING (OPERATION) CONTROL Sir F.Vernon Thomson (Chairman)
ADVISER ON COAL SHIPMENTS Mr.D.G.Ferguson
ADVISER ON FOREIGN SHIPPING Mr.R.M.K.Turnbull
STATISTICS Mr.P.N.Harvey
COMMERCIAL SERVICES Mr.G.P.Christopher
PUBLIC RELATIONS Mr.F.C.Pritchard
DEPUTY DIRECTOR GENERAL (INLAND TRANSPORT) Mr.R.H.Hill
ALLOCATION OF TONNAGE MR.F.A.Griffiths
ESTABLISHMENT Mr.S.A.Bailey
DEPUTY DIRECTOR GENERAL (SHIPPING - GROUP I) Sir Julian Foley
DEPUTY DIRECTOR GENERAL (SHIPPING - GROUP II) Mr.T.G.Jenkins
SEA TRANSPORT Mr.W.G.Rynard
MARINE B. Mr.N.A.Guttery
FINANCE Mr.R.H.Wilson
PORT & TRANSIT CONTROL Mr.R.B.Sanderson
LINER DIVISION Mr.T.Harrison Hughes
COASTING & SHORT SEA SHIPPING DIVISION Capt.J.Fisher
FOREIGN SHIPPING RELATIONS Mr.W.G.Weston
MARINE A. & RATES OF HIRE Mr.W.Carter
MARINE C. (Including TANKER TONNAGE) Mr.G.C.Duggan
ACCOUNTANT GENERAL Mr.W.Robson
DIRECTOR OF PORTS (U.K.) Mr.R.H.Tolerton
SHIP MANAGEMENT DIVISION Mr.L.A.Common
GENERAL Mr.E.J.W.Jackson
COAL
FINANCE Mr.K.L.Macaulay
RAILWAYS Mr.G.S.Szlumper
PRIORITIES & GENERAL, CANALS Mr.E.B.Hart
HIGHWAYS ENGINEERING Mr.F.C.Cook
RATES & CHARGES Mr.S.J.Page
ROAD TRANSPORT Mr.C.A.Birtchnell
HIGHWAYS ADMINISTRATION Mr.P.Wilson
Note: SHIPPING (OPERATION) CONTROL:-
Chairman: Sir F.Vernon Thomson
Members: The Directors of the
Liner
Ship Management
Coasting and Short Sea Shipping } Division
Sea Transport
The Head of the Port & Transit Control
The Deputy Director General (Shipping - Group II)
The Director General, the Deputy Director General (Shipping - Group I), and the Director of Commercial Services are able to attend meetings of the Control.
Administration of Divisions
Operational Control
Technical Advice
Right of Reference
Operational Liaison

The new organisation evolved for the control of British transport as a result of the fusion of the Ministry of Transport and the Ministry of Shipping from May 9. This chart has been prepared by the THE RAILWAY GAZETTE from official information communicated by the Ministry of War Transport on June 9

Dakar *via* Kulikoro to Bamako. Meanwhile the difficult section through the Reggan region would be negotiated and preparations made for the construction of the Trans-Saharan itself. Even for this programme some 125 miles of minor lines in France would have to be taken up. To build the whole railway 300,000 tons of steel would be necessary which at the moment was not available.

The *New York Sun* is reported by *The Times* of June 5 to have received information that the recent decision to proceed with the building of the Trans-Saharan Railway so as to form a connection between Algeria and Dakar was taken at the instigation of Germany. Although the construction of the line is estimated to take two or three years, it would serve as a pretext for building a motor highway for the transport of materials. Such a highway, which could be completed in eight months, would serve nearly as well as a railway for sending troops and supplies to Dakar.

Ministry of War Transport Organisation

The recent appointment of Lord Leathers has already been recorded in our Personal columns as has also the fusion of the Ministries of Shipping and of Transport, which followed his appointment in the joint capacity. The fusion was dealt with at some length in an editorial article in THE RAILWAY GAZETTE of May 9. An Order in Council was made on May 9 giving legal effect to the amalgamation of the Ministries of Shipping and Transport under the new Ministry of War Transport. Since then the organisation of the new Ministry has been completed and the arrangements made are shown in diagrammatic form on the opposite page. The Ministry of Transport dates back to 1919. The Ministry of Shipping was brought into being after the war had been in progress for two months and it was formed on the basis of the Mercantile Marine Department of the Board of Trade, which was in itself a residue of the Ministry of Shipping which operated during the war of 1914-19. In determining the form of the combined organisation, the object has been to give full effect to the conception of shipping and inland transport as one continuous operation under war conditions. It had been recognised for some time before the decision was taken to merge the two departments that the main overlapping of function took place at the ports, where previously the Ministry of Shipping was responsible for the ships entering, but where, from that time onwards, the traffic came under the Ministry of Transport. The ports, therefore, provided the link between the internal and external transport of the country. The port work hitherto done at the Ministry of Transport has been combined with the similar operations of the former Ministry of Shipping and has resulted in the formation of a Port & Transit Control Division at the new Ministry. Under the head of this control the Director of Ports is responsible for all work in Great Britain relating to the distribution of ships to ports, port equipment, and operation of labour in the ports. This unified control is linked with the Shipping (Operation) Control and arrangements are being made to secure full liaison with the divisions concerned with inland transport.

The Director-General (Sir Cyril Hurcomb) is assisted in the administrative control of the Department by three Deputy-Directors-General, two for shipping and one for inland transport, whose functions are divided for administrative purposes into groups which, apart from inter-office services and finance, can be described broadly as those relating to servicing of ships and general administration of mercantile marine; use and operation of ships; inland transport; and general programmes. Included in the first group is the branch concerned with sea transport for the Forces.

The Principal Shipping Adviser & Controller of Commercial Shipping (Sir Vernon Thomson) continues to be responsible for advising on all questions affecting the operation of commercial shipping. Under his chairmanship a Shipping (Operation) Control has been established, which is responsible to the Minister for exercising close supervision over the turn-round and operation of ships. The control supplements and does not displace the responsibility of the individual directors. Its members are the Directors of the Liner, Ship Management, Coasting & Short Sea Shipping, and Sea Transport Divisions, the head of the Port & Transit Control, and the Deputy-Director-General (Shipping, Group II). The Director-General, the Deputy-Director-General (Shipping, Group I), and the Director of Commercial Services will be able to attend meetings of the control.

Inland transport is brought under Mr. R. H. Hill, Deputy-Director-General (Inland Transport), and the railways, road transport, and inland waterways sections will be in close touch with the Port & Transit Control Division. The finance sections of the two merged departments will continue with separate organisations for the time being, but it is hoped that within a very short time there will be a complete merging of the other departments, and it is believed that this will be helped by the fact that in the organisation set up the endeavour has been made to follow a logical system of grouping and of keeping together personnel and departments which were already in close contact. From now onwards there will be four main groups of work in the Ministry of War Transport. The first will deal with general programmes devoted mainly to shipping; the second with the central core of internal transport; the third with the general administration of the Mercantile Marine; and the fourth with the actual use and operation of ships linked with the Port & Transit Control, and through that division with internal transport and also with the Shipping (Operation) Control.

Exhibition of Railway Photographs

A special railway exhibition coach with over 100 photographs illustrating the many activities and problems of the railways in wartime began a tour of the country on June 9. The exterior of the coach is painted a distinctive blue and bears the words " British Railways Exhibition Coach." The photographs, many of which have been reproduced from time to time in THE RAILWAY GAZETTE, range from the evacuation of school children, the return of the B.E.F. from Dunkerque, shelterers in London tubes, and the fight made by the railways against extreme winter conditions, to the rapid repair of air-raid damage. The photographs were exhibited at Charing Cross Underground station last year, and it was the success of the exhibition which prompted the tour which began at Liverpool Street station on Monday last.

U.S. Railway Section Activities

Expanding U.S. War Department activities in connection with the National Defence Programme have been reflected in the additional work which has come to the Railway Section in the Office of the Chief of Engineers at Washington. The Railway Section is a planning and technical agency which in peacetime prepares the way for such combat-zone railway operations as may be required in wartime. Combat-zone operations are actually conducted by the Military Railway Service, but the Railway Section remains in wartime as a sort of " system committee " on technical matters.

Normally one regular army officer is assigned to the Railway Section, which is now headed by Major L. T. Ross. Recently, however, the staff has been augmented by two reserve officers who have been called to active duty—one from the railway supply industry and the other from the railroad industry. They are Major Howard G. Hill, Sales and Service Engineer for the Hennessy Lubricator Company, and Major Edwin W. Peterson, General Storekeeper of the Bangor & Aroostook RR.

The Railway Section, besides keeping up to date the Army's paper plans for wartime combat-zone railroad operations, is also in continuing contact with railroads for the purpose of promoting the organisation of reserve units of the Military Railway Service. In the event of war, that service, which is headed by Colonel Carl R. Gray, Jun., Executive Vice-President of the Chicago, St. Paul, Minneapolis & Omaha RR., would be seconded for the job of railroading in the combat-zone. An example of the organisation is afforded by the Army's plans to purchase the Red River & Gulf Railroad for the purpose of training a railway operating battalion. The Railway Section has been doing the work in connection with the acquisition of the line, equipping it, and so forth.

While it is understood that no further expansion is in sight under present conditions, a wartime basis for the Railway Section would perhaps involve an expansion which would take the form of breaking up the work for assignment to various newly-organised branches within the section.

Supplied by the RAILWAY GAZETTE from official information communicated by the Ministry of War Transport on June 9

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Notes and News

Milford Docks Company.—Under Statutory Rules & Orders of 1941 the Milford Docks Company is not permitted to publish or circulate its annual accounts and report.

U.S.A. Rail Wage Demand.—Fourteen railway organisations of the American Federation of Labour, representing over 800,000 workers, decided to demand formally on June 10 wage increases of 30 to 34 cents an hour.

Grand Trunk Junior Stocks Limited.—Notice is given in *The London Gazette* of May 27, 1941, that at the expiration of three months from that date, the name of this company will, unless cause is shown to the contrary, be struck off the register, and the company will be dissolved.

Great Southern Railways Company.—The transfer books of this company relating to the 4 per cent. debenture stock, the 4 per cent. redeemable (1942) debenture stock, and the 4 per cent. City of Dublin Junction Railways debenture stocks, 1884 and 1887, and 1894 and 1897 will be closed from Saturday, June 14, to Friday, July 4, both days inclusive.

Canadian Pacific Railway.—Gross earnings for April were $16,655,000, an increase of $4,611,000, and expenses were $13,506,000, or $3,408,000 more. Net earnings at $3,149,000 were $1,203,000 more than for April, 1940. For the first four months of 1941 gross earnings were $62,068,000, an increase of $14,387,000, and the net earnings of $11,669,000 were $4,420,000 greater than for the first four months of 1940.

Institute of Transport in South Africa.—The annual report of the South Africa Centre of the Institute of Transport for 1939-40 shows a membership at the end of the year of 467. The sub-centre at Johannesburg had been able to carry out a full programme of meetings, but the Cape Town and Durban centres had found it impracticable to maintain normal activities. The report contains the announcement that the Minister of Railways & Harbours has offered prizes for the two best papers on the development of a Ministry of Transport for South Africa.

Mexican National Railways Extension.—The Ixcaquixtla to Petlalcingo Railway has been taken over by the Mexican Government and will henceforward be operated as a part of the National system, according to a Decree published in the *Diario Oficial* of March 29, 1941. The railway, which serves a rich region in the State of Puebla, is 45 miles in length.

Railway and Other Reports

Assam Railways & Trading Co. Ltd.—Dividends have been declared on the pre-preference shares at the rate of 8 per cent. per annum, and on the new 6 per cent. preference shares at the rate of 6 per cent. per annum for the half-year ending June 30, 1941.

St. Louis South Western Railway Company.—The annual report for 1940 shows railway operating revenues of $20,642,003, an increase of $1,032,038, but total operating expenses at $14,958,176 were lower by $639,594, which brings the operating ratio down from 79·54 per cent. to 72·46 per cent. Net railway operating income amounted to $2,795,591, an improvement of $1,652,992, and the final result is a net deficit of $248,758, comparing with a net deficit of $2,018,321 for 1939.

Ribble Motor Services Limited.—The directors of this subsidiary of the London Midland & Scottish Railway Company and Tilling & British Automobile Traction Limited jointly, have declared a final dividend of 6 per cent., making 10 per cent. for the year to March 31 last (same).

Guest, Keen & Nettlefolds Limited.—The directors announce that delays due to the war make it necessary to defer for at least a month the announcement of dividends of which notice is usually given in the early days of June. For the year ended March 31, 1940, the ordinary stock received a total dividend of 6½ per cent., and an interim of 2½ per cent. was paid in November last on account of the year ended March 31, 1941.

Ruston & Hornsby Limited.—Payment will be made on July 11 of a dividend of 12½ per cent. on the ordinary capital for the year to March 31 last, the same as for 1939-40.

Irish Traffic Returns

IRELAND		Totals for 20th Week			Totals to Date		
		1941	1940	Inc. or Dec.	1941	1940	Inc. or Dec.
		£	£	£	£	£	£
Belfast & C.D. (80 miles)	pass.			No returns to hand			
	goods						
	total						
Great Northern (543 miles)	pass.			No returns to hand			
	goods						
	total						
Great Southern (2,049 miles)	pass.	35,665	32,418	+ 3,247	710,784	610,574	100,210
	goods	46,644	44,696	+ 1,948	1,011,693	901,777	109,916
	total	82,309	77,114	+ 5,195	1,722,477	1,512,351	+ 210,126
L.M.S.R. (N.C.C.) (247 miles)	pass.			No returns to hand			
	goods						
	total						

British and Irish Railway Stocks and Shares

Stocks	Highest 1940	Lowest 1940	Prices June 5, 1941	Rise/Fall
G.W.R.				
Cons. Ord.	52	22½	32½	— 1½
5% Con. Pref. ...	103½	58	99½	— ½
5% Red. Pref. (1950)	105½	88	103	—
4% Deb.	107½	90½	110½	— 1
4½% Deb.	108½	96½	113	—
4½% Deb.	114¾	96	116¼	—
5% Deb.	124	106	130	—
2½% Deb.	66½	57	66	—
5% Rt. Charge ...	117¾	97	127½	—
5% Cons. Guar. ...	117	90½	125½	— ½
L.M.S.R.				
Ord.	24⅞	9	12	— ½
4% Pref. (1923) ...	60½	21⅜	38½	— ½
4% Pref.	70¾	35	56	— 1½
5% Red. Pref. (1955)	94½	60	84½	—
4% Deb.	101¾	81	101¾	— ¾
5% Red. Deb. (1952)	109½	102	108	—
4% Guar.	93¾	65	94½	— 1
L.N.E.R.				
5% Pref. Ord. ...	8⅜	1½	2⅜	— ⅛
Def. Ord.	4⅜	1¼	1⅜	—
4% First Pref. ...	60	20	37½	—
4% Second Pref. ...	22⅝	6½	12⅜	— ⅛
5% Red. Pref. (1955)	80	34½	62½	—
4% First Guar. ...	86½	56	83½	— 1½
4% Second Guar. ...	77½	37	70½	—
3% Deb.	73½	54½	74½	— 1½
4% Deb.	97⅜	74	100½	—
5% Red. Deb. (1947)	107	96¾	104	—
4½% Sinking Fund Red. Deb.	104	98	102½	—
SOUTHERN				
Pref. Ord.	79	34	50	— ½
Def. Ord.	22½	7	9⅜	— ⅛
5% Pref.	104½	58¾	93½	— ½
5% Red. Pref. (1964)	105	85	100½	—
5% Guar. Pref. ...	116¾	90	125½	— ½
5% Red. Guar. Pref. (1957)	114 7/16	94	113½	—
4% Deb.	106¾	84½	108½	— 1½
5% Deb.	122½	100	128½	—
4% Red. Deb. (1962–67)	106	96½	106	—
4% Red. Deb. (1970–80)	106⅜	93	106	—
FORTH BRIDGE				
4% Deb.	95½	87	93½	—
4% Guar.	93½	81½	91½	—
L.P.T.B.				
4½% "A"	116	103	116½*	— 2½
5% "A"	121½	107	125*	— 1½
4½% "T.F.A." ...	105½	101	102½*	—
5% "B"	116	102	111 *	— 1½
"C"	65½	24	29½*	— 1½
MERSEY				
Ord.	26	18½	20½	—
4% Perp. Deb. ...	92½	86¾	92½	—
3% Perp. Deb. ...	68	63	67½	—
3% Perp. Pref. ...	57	50½	53½	—
IRELAND				
BELFAST & C.D.				
Ord.	4	3	4	—
G. NORTHERN				
Ord.	4½	1½	8½	— 2½
G. SOUTHERN				
Ord.	12½	4	8	+ 1½
Pref.	15½	6	10	+ 3
Guar.	36	15	29½	+ 2½
Deb.	55½	40	53¾	+ 2½

* ex dividend.

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46th Annual Edition, 1940-41

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OFFICIAL NOTICES

Canadian National Railway Company

WELLINGTON GREY & BRUCE RAILWAY COMPANY, 7 PER CENT. BONDS

AT the semi-annual ballot for May, 1941, the following Wellington Grey & Bruce Railway Company 7 per cent. Bonds were drawn and will be paid at par at the offices of the Canadian National Railway Company in Montreal, Canada, or at Orient House, 42/5, New Broad Street, London, E.C.2, England, on and after the 1st July, that is to say, Bonds numbered :—

25, 205, 214, 556, 581, 699, 941, 1015, 1036, 1117, 1159, 1264, 1279, 1287, 1318, 1576, 1837, 1851, 2105, 2283, 2321, 2559, 2561, 2584, 2652, 2658, 2740, 2775, 3159, 3170, 3340, 3372, 3388, 3392, 3468, 3474, 3509, 3660, 3698, 3892, 3898, 4035, 4270, 4343, 4403, 4420, 4575, 4648, 4651, 4778, 4804, 4836, 5049, 5061, 5094, 5122, 5134, 5221.

In all £5,800 sterling.

Holders of these Bonds will take notice that the interest will cease after 1st July, 1941.

A. H. CONEYBEARE,
European Secretary & Treasurer.

London, 9th June, 1941

Canadian National Railway Company

WELLINGTON GREY & BRUCE RAILWAY COMPANY, 7 PER CENT. BONDS

NOTICE is hereby given that the estimated earnings of the Wellington Grey & Bruce Railway Company for the half-year ending 30th June, 1941, applicable to meet interest on the above Bonds, will admit of the payment of £4 17s. 4d. per £100 Bond, and that this payment will be applied as follows, viz. :—

£1 16s. 1d., balance due for Coupon No. 119, due 1st January, 1930 ; and £3 1s. 3d., on account of Coupon No. 120, due 1st July, 1930, and will be made on and after 1st July, 1941, at the offices of the Canadian National Railway Company, Orient House, 42/5, New Broad Street, London, E.C.2, England.

The coupons must be left three clear days for examination.

A. H. CONEYBEARE,
European Secretary & Treasurer.

London, 9th June, 1941

Staff and Labour Matters

Railway Shopmen—War Advance

At meetings held in London on Tuesday, June 3, between the railway companies and the trade unions, it was agreed that the war wage payable to railway workshop staff should be increased as from January 6, 1941, by the following amounts :—

Adults.

Male staff ... ... 4s. a week
(making a total war wage of 28s. 6d. a week).
Female staff ... ... 3s. a week
(making a total war wage of 18s. a week).

Juniors.

Boys under 18 years of age ... 10d. a week
(making a total war wage of 6s. 6d. a week).
Boys 18 and under 21 years of age 1s. 9d. a week
(making a total war wage of 13s. a week).
Females under 18 years of age ... 10d. a week
(making a total war wage of 6s. 6d. a week).
Females 18 and under 21 years of age 2s. a week
(making a total war wage of 13s. 3d. a week).

The total war wage payable to railway workshop staff includes a sum which has been carried over from the 1914-18 war, and the increases which have been granted since the commencement of the present war are : 12s. to male adults ; 7s. 10d. to female adults ; 2s. 6d. to boys and girls under 18 years of age ; 5s. to boys 18 and under 21 years of age ; and 5s. 3d. to girls 18 and under 21 years of age.

A.S.L.E. & F. Annual Conference

The annual conference of the A.S.L.E. & F. was held in Blackpool this year during the week commencing May 26. In his presidential address, Mr. W. J. Cleaver said that the cost of living had increased by 20 per cent., but wages had risen by only 15 per cent. and the Government must accept responsibility for the margin. Mr. Clever reported that the society's funds were strong and that the entry of about 7,000 members last year brought the total membership to more than 60,000.

Mr. W. P. Allen, general secretary, said their members were facing great risks and the rank and file of locomotive men had kept open the railways no matter how heavy or prolonged the Blitz.

Serious dissatisfaction was expressed by the delegates on the recent award of 4s. a week increase in the war wage. It was declared that the award would not adequately compensate locomotive men for their hardships since the beginning of the war or meet the increased cost of living. Keen opposition was expressed to the institution of compulsory arbitration within the scheme of the railway machinery for negotiation. Delegates expressed the view that the national arbitration order was introduced with undue haste. It was contended that the recognised machinery of negotiation had to be satisfactory and that the goodwill ensuing therefrom will be seriously endangered by making the Railway Staff National Tribunal awards final and binding.

It was stated that rationing regulations and unequal distribution of foodstuffs were causing hardship to railway workers. Men were called on for long hours of duty, often without warning, to find no facilities for obtaining food. Mr. W. P. Allen said the only real remedy would be to set up canteens where railway workers could obtain essential foodstuffs in the same way as workers in other industries. Where it was not possible to do this, the cheese ration should be increased. The conference passed a resolution embodying the suggestion.

Pensions for railwaymen on a contributory basis were also discussed. Mr. W. P. Allen said a superannuation scheme should be set up at once by the railway companies and the London Passenger Transport Board on a contributory basis.

Contracts & Tenders

Metropolitan-Vickers Electrical Co. Ltd. has received a renewal of its contract with the London & North Eastern Railway Company for Cosmos lamps.

The A.B. Motala Verkstad, Sweden, is understood to have received large rolling stock orders from the Commissariat of Transport of the U.S.S.R. which may even necessitate the extension of the Motala works or the subletting of parts of the contracts.

The U.S. Southern Pacific Company has placed orders for 50 large units, including 40 cab-ahead engines, among the heaviest and most powerful in the world, and 10 streamlined units of the daylight type. The estimated cost of the engines is $11,000,000. The cab-ahead locomotives will be constructed by the Baldwin Locomotive Works, and the streamlined engines by the Lima Locomotive Works. The company has also placed orders for 25 diesel-electric switching locomotives of 1,000 h.p., in addition to 15 of 600 and 660 h.p. ordered earlier this year. The cost of the 40 units is estimated at $2,900,000. Approximately 2,500 freight wagons costing $9,000,000 are also included in the current programme.

The heaviest building construction permit issued by Montreal City Hall in a number of years was recorded recently when the Montreal Locomotive Works Limited received sanction to construct a $1,020,000 plant on Notre Dame street east between Dixon and Lacoaste avenues. The plans call for a frontage of 410 ft. and depth of 770 ft.

At the present time there is an urgent demand for a large quantity of railway sleepers and crossing timbers, and it is essential in the national interest that there should be a substantial increase in the home-grown supplies. All producers in hardwood and/or softwood have been asked to co-operate by offering the maximum quantity possible. Arrangements have been made with the railway companies and merchants to assist producers in the prompt disposal of all quantities produced. Supplies may be offered to the railway companies addressing particulars to the Railway Executive Stores Committee, Whaddon Lodge, Cockfosters Road, Hadley Wood, Middlesex. The railway companies have undertaken to inspect quantities of 1,000 pieces or more at the producing mills, and to give delivery instructions without delay for all quantities accepted. They have also issued a relaxed wartime specification and have agreed to pay maximum basis prices f.o.r. with the permitted increases for certified town and port-city mills. Any sleepers or crossing timbers rejected by the railway companies at the producers' yards will be taken by the merchants at full control price less 10 per cent., but the latter will not pay the extra for port-city mills.

Railway Stock Market

Quiet and inactive conditions have continued to rule in the stock and share markets, and where selling occurred it did not reach any considerable scale. Although the majority of movements were reactionary, they were fractional in character, and at the time of writing, some improvement in demand has been reported, sentiment having been encouraged by more favourable views as to the latest war developments in Syria and elsewhere. Despite the small volume of business, indications were not lacking that many securities, more particularly those of the fixed interest class, continued to be held tightly and were in short supply in the market. Consequently, quotations may be marked up sharply when there is any sustained improvement in demend. Moreover, the extension of rationing to clothes, and other developments, suggest that the weight of money available for investment in Government and other high-class securities will be further increased. Sooner or later, there may, therefore, be a strong advance in market values, in which home railway prior charges may play a prominent part, because there are few, if any, leading investments offering as attractive yields. Bearing in mind the numerous occasions when the reasonable hopes of holders have been disappointed, it is perhaps not altogether surprising that there is an attitude of caution in regard to home railway junior stocks. Nevertheless, the belief persists that the minimum revenue guarantee is likely to be maintained, and, moreover, there is, of course, general confidence that, whatever the basis of war damage compensation, revision of the financial agreement, etc., the high investment status of the prior charges will be unimpaired. The market is hopeful that, if possible, there may be an interim statement as to the broad principles of revision of the financial agreement. It is also hoped that before long the Ministry of War Transport may be able to make a statement in regard to any further measures necessary for increasing the efficiency of all forms of transport to meet the special requirements of war conditions.

In accordance with the general market trend at the time of writing, home railway securities are showing a somewhat better tendency, although on balance, prices have reacted, earlier declines not having been regained. On balance, Great Western ordinary has moved back from 33 to 32; but the 5 per cent. preference remained at 99½, and the guaranteed stock was 125½. On the other hand, Great Western debentures were a point down at 110. At 12, compared with 12⅛, L.M.S.R. ordinary was little changed, but the senior preference went back from 57 to 56, and the 1923 preference from 38½ to 38. L.M.S.R. guaranteed was no better than 94; the 4 per cent. debentures had a firm appearance at 102. Southern preferred was also steady, and at 50 was unchanged on balance, at which the yield is 10 per cent. Incidentally, larger yields than this are offered by both L.M.S.R. 1923 preference and L.N.E.R. first preference, and in comparison they would appear to be undervalued. At 9¼, Southern deferred showed a fractional decline; the 5 per cent. preference kept at 93½; and the guaranteed stock at 125½; the debentures were 108⅛. Among L.N.E.R. issues, however, the 4 per cent. debentures were lower at 99½, as were the 3 per cent. debentures at 74½. This railway's first guaranteed stock was a point down at 83, and the second guaranteed eased from 70½ to 70. On the other hand, the first and second preference remained at 38 and 12½, respectively. Whereas slightly reduced prices ruled for London Transport "A" and "B" stocks (there having been a tendency to exchange into railway securities offering higher yields), the "C" stock was in better request and improved from 29½ to 30.

Elsewhere, movements in Argentine railway issues were small, but have been against holders. Central Uruguay 4½ per cent. debentures, however, transferred at 48, and in other directions Leopoldina debentures were firm on the decision to pay a half-year's arrears of interest. Minor fluctuations were shown in Canadian Pacific. French railway sterling bonds have been marked down in price.

Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

	Railways	Miles open 1940-41	Week Ending	Traffic for Week: Total this year	Traffic for Week: Inc. or Dec. compared with 1940	No. of Weeks	Aggregate Traffics to Date: Totals: This Year	Aggregate Traffics to Date: Totals: Last Year	Aggregate Traffics to Date: Increase or Decrease	Shares or Stock	Prices: Highest 1940	Prices: Lowest 1940	Prices: June 5, 1941	Prices: Yield % (See Note)
				£	£		£	£	£					
South & Central America	Antofagasta (Chili) & Bolivia	834	1.6.41	24,390	+ 1,200	22	387,520	420,490	— 32,970	Ord. Stk.	11½	3½	4½	Nil
	Argentine North Eastern ...	753	31.5.41	ps. 191,300	+ ps.21,800	48	ps. 6,834,500	ps. 7,390,000	— ps.555,500	,,	3¾	1	2	Nil
	Bolivar	174	Apr. 1941	3,912	— 738	18	14,932	16,240	— 1,308	6 p.c. Deb. Bonds	8	5	5	Nil
	Brazil	—	—	—	—	—	—	—	—		—	—	—	—
	Buenos Ayres & Pacific ...	2,801	24.5.41	ps.1,545,000	+ ps.245,000	47	ps.67,425,000	ps. 65,691,000	+ ps.1,734,000	Ord. Stk.	4½	1	1¾	Nil
	Buenos Aires Central ...	190	18.1.41	$70,400	— $20,200	29	$2,477,400	$2,994,900	— $517,500		—	—	—	—
	Buenos Ayres Great Southern	5,082	24.5.41	ps.2,308,000	+ ps.553,000	47	ps.104,824,000	ps.110,644,000	— ps.5,820,000	Ord. Stk.	10⅛	3	3¾	Nil
	Buenos Ayres Western ...	1,930	24.5.41	ps. 937,000	+ ps.292,000	47	ps.36,930,000	ps. 37,146,000	— ps. 216,000	,,	8⅜	2	2¾	Nil
	Central Argentine	3,700	31.5.41	ps. 1,832,000	+ ps.229,000	48	ps.78,867,600	ps. 84,855,950	— ps.5,988,350	,,	8¼	2	2¾	Nil
	Do.	—	—	—	—	—	—	—	—	Dfd.	4	¼	1	Nil
	Cent. Uruguay of M. Video	972	24.5.41	29,030	+ 5,021	47	1,086,523	1,021,610	+ 64,913	Ord. Stk.	3¼	¼	1¼	Nil
	Costa Rica	188	Mar. 1941	18.817	— 3,304	39	136,720	158,217	— 21,497	Stk.	23½	14	15½	12⅞
	Dorada	70	Apl. 1941	12.500	+ 900	17	49,200	46,100	+ 3,100	1 Mt. Db	99	97½	98	6⅛
	Entre Rios	808	31.5.41	ps.250,900	— ps.12,600	48	ps.10.129,000	ps.11.440,900	— ps.1,311,900	Ord. Stk.	4	¼	1¼	Nil
	Great Western of Brazil ...	1,016	31.5.41	7,300	+ 1,200	22	215,200	247,800	— 32,600	Ord. Sh.	4/-	1/-	⅛	Nil
	International of Cl. Amer. ...	794	Mar. 1941	$487.887	— $103,925	12	$1,444,383	$1,762,134	— $317,751	—	—	—	—	—
	Interoceanic of Mexico ...	—	—	—	—	—	—	—	—	1st Pref.	9d.	9d.	¼	Nil
	La Guaira & Caracas... ...	22¾	May,1941	5.235	— 1,425	22	30.145	34,675	— 4,530	—	6	4	—	—
	Leopoldina	1,918	24.5.41	22,775	+ 2,422	21	490,555	452,025	+ 38,530	Ord. Stk.	2⅛	½	½	Nil
	Mexican	483	31.5.41	ps. 532,900	+ ps. 53,300	22	ps. 6,761,900	ps. 6,687,900	+ ps. 74,000	,,	2/11¼	⅛	⅛	Nil
	Midland of Uruguay ...	319	Apl. 1941	11,861	— 851	43	119,846	107,251	+ 12,595	—	—	—	—	—
	Nitrate	386	31.5.41	4,673	— 530	22	42,957	75,114	— 32,157	Ord. Sh.	2¾	1½	2⅛	5⅛
	Paraguay Central	274	31.5.41	$4,693,000	+ $1,522,000	48	$158,055,000	$153,946,000	+ $4,109,000	Pr. Lt. Stk.	41	36	30½	19⅛
	Peruvian Corporation ...	1,059	May,1941	63.038	— 6,669	48	709,504	750,190	— 40,686	Pref.	4	1	2	Nil
	Salvador	100	29.3.41	£27,630	— £5,089	39	£617,847	£776,052	— £158,205	—	—	—	—	—
	San Paulo	153½	25.5.41	37,500	— 3,830	21	759,250	739,966	+ 19,284	Ord. Stk.	50	23	26	7 ⅞
	Taltal	160	Apr. 1941	2,310	— 775	43	27,450	26,220	+ 1,230	Ord. Sh.	15/1½	⅜	⅜	Nil
	United of Havana	1,346	31.5.41	24,533	+ 4,178	43	1,171,335	1,184,989	— 13,654	Ord. Stk.	⅜	⅛	⅛	Nil
	Uruguay Northern	73	Apl. 1941	1,009	— 239	43	11,317	11,242	+ 75	—	—	—	—	—
Canada	Canadian National	23,633	31.5.41	1,764,149	+ 460,674	22	23,214,627	18,264,322	+ 4,950,304	—	—	—	—	—
	Canadian Northern	—	—	—	—	—	—	—	— 4 p.c.	Perp. Dbs.	86	68	92	4⅜
	Grand Trunk	—	—	—	—	—	—	—	—	4 p.c. Gr.	105¾	95⅛	101¼	3⅛
	Canadian Pacific	17,153	31.5.41	1,312,800	+ 458,400	22	16,268,800	12,238,600	+ 4,030,200	Ord. Stk.	9⅞	4⅜	8⅞	Nil
India†	Assam Bengal...	1,329	—	—	—	—	—	—	—	Ord. Stk.	99⅜	71	100	3
	Barsi Light	202	31.3.41	5,685	+ 2,318	52	167,280	127,072	+ 40,208	—	—	—	—	—
	Bengal & North Western ...	2,086	30.4.41	273,900	— 13,992	4	273,900	287,892	— 13,992	Ord. Stk.	283	234	300	5⅛
	Bengal Dooars & Extension	161	Sept. 1940	14,625	+ 508	46	78,405	66,243	+ 12,162	,,	—	—	—	—
	Bengal-Nagpur	3,269	31.3.41	266,175	+ 11,055	52	8,989,306	8,266,447	+ 722,859	,,	96	83⅞	100¼	4
	Bombay, Baroda & Cl. India	2,986	31.5.41	338.175	+ 6,375	9	1,936,425	1.876,425	+ 60,000	,,	108	99	109	5½
	Madras & Southern Mahratta	2,939	31.3.41	212,100	— 17,940	52	6,214,920	5,941,993	+ 272,927	,,	104	97⅞	104½	7½
	Rohilkund & Kumaon ...	571	30.4.41	62,775	— 6,683	4	62.775	69,458	+ 6,683	,,	284	238	293	5⅛
	South Indian	2,500	31.3.41	143,875	+ 5,550	52	4,605,988	4,134,430	+ 471,558	,,	93¾	83	97½	4⅛
Various	Beira	204	Mar. 1941	73,158	—	26	429.691	—	—	—	—	—	—	—
	Egyptian Delta	610	31.3.41	7,264	+ 1,883	52	245,951	214,172	+ 31,779	Prf. Sh.	7/10½	⅜	⅜	Nil
	Kenya & Uganda	1,625	—	—	—	—	—	—	—	—	—	—	—	—
	Manila	—	—	—	—	—	—	—	—	B. Deb.	53	44½	45½	7⅛
	Midland of W. Australia ...	277	Feb. 1941	13,851	+ 1,637	35	119,604	102,871	+ 16,733	Inc. Deb.	88	80	87½	6⅜
	Nigerian	1,900	22.2.41	74,093	+ 16,001	30	2,056,584	1,856,487	+ 200,097	—	—	—	—	—
	Rhodesia	2,442	Mar. 1941	465,823	—	26	2,853,899	—	—	—	—	—	—	—
	South Africa	13,287	19.4.41	698,196	+ 38,957	3	1,964,103	1,837,308	+ 126,795	—	—	—	—	—
	Victoria	4,774	Dec. 1940	1,009,886	+ 65,971	26	—	—	—	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of ⅛ Argentine traffics are given in pesos
† Receipts are calculated @ 1s. 6d. to the rupee